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**TRANSACTIONS**  
**OF**  
**THE HIGHLAND AND AGRICULTURAL**  
**SOCIETY OF SCOTLAND**

**WITH**

**AN ABSTRACT OF THE PROCEEDINGS AT BOARD AND GENERAL  
MEETINGS, AND THE PREMIUMS OFFERED BY  
THE SOCIETY IN 1937**

**PUBLISHED ANNUALLY**



**FIFTH SERIES**

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\*.\* *It is to be distinctly understood that the Society is not responsible for the views, statements, or opinions of any of the Writers whose Papers are published in the 'Transactions.'*

JOHN STIRTON,  
*Secretary.*

8 EGLINTON CRESCENT,  
EDINBURGH.

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TRANSACTIONS  
OF  
THE HIGHLAND AND AGRICULTURAL  
SOCIETY OF SCOTLAND

KING GEORGE SIXTH.

IN the volume of 'Transactions' for last year, an article appeared which was intended to be at once a tribute to the sterling qualities of the late King George Fifth, a testimony to the heartfelt sorrow occasioned throughout the world by his decease, an expression of profound sympathy with his widowed and beloved Queen, and a dutiful proffer of loyalty and devotion to his successor King Edward Eighth.

When that article was penned the Nation and the Empire had paid their last solemn farewell to their beloved and revered Head. In the resulting calm, which inevitably follows a time of violent storm, be it of the elements, of emotion, or of war, they were able to pause, and, as it were, take stock of the period which might fittingly be considered as embracing the reign of King George Fifth. The conclusion generally arrived at was that no quarter of a century in the history of the world had experienced so many grave crises, or furnished so many vital advances in the realms of scientific and industrial improvement, as that through which we had just passed. While the incidence of a war, fought on an unprecedented scale of magnitude and frightfulness, had left its

tragic impression on the lives and homes of the combatants, its very necessities had given rise to inventions which it was hoped could be utilised for the benefit of humanity in days of peace. Not only so, but it was felt that, to some extent at least, the depression which had settled on our industries, as a result of the gigantic drain on resources caused by the war, had begun to lift, and in the matters of unemployment and revival of trade the outlook was more optimistic than it had been for years.

Throughout the Empire it was felt that much of the credit for this better condition of affairs was due to the unity and loyalty of the peoples who were proud to acknowledge King George Fifth as their Head and inspiration, and to whose eldest son and successor, King Edward Eighth, they unanimously and with sincerity extended their humble loyalty and affection, in the confident hope that in him they would find one well fitted by upbringing, experience and natural charm, to rule over them.

For personal reasons, which need not be entered into here, King Edward Eighth, in December 1936, deemed it his duty to relinquish the great position to which he had acceded by birthright and the desire of his peoples. His decision to abdicate was announced in a message from His Majesty, which was read by the Speaker in the House of Commons on 10th December. In the course of the message, the following passages occurred :—

“After long and anxious consideration, I have determined to renounce the Throne to which I succeeded on the death of my father, and I am now communicating this, my final and irrevocable decision.

“Realising as I do the gravity of this step, I can only hope that I shall have the understanding of my peoples in the decision I have taken and the reasons which have led me to take it.”

Mr Stanley Baldwin, the Prime Minister, in the course of an historic speech immediately following the reading of the King's Message, referred to conversations he had had with His Majesty, and said—

“I want you to put yourselves in His Majesty's place and to realise what his feelings were. . . . He always had

before him three—no, four—things that he repeated in the course of this conversation. One was that if he went he would go with dignity. He would not allow a situation to arise in which he could not do that. He wanted to go with as little disturbance to his Ministers and to his people as possible. He wished to go in circumstances that would make the succession of his brother as little difficult as possible. . . . I honour and respect him for the way in which he behaved at that time. . . . While there is not a soul among us who will not regret this (His Majesty's decision) from the bottom of his heart, there is not a soul here to-day that wants to judge. We are not judges."

In concluding his speech, Mr Baldwin, who throughout the unprecedented crisis merited and obtained the confidence and admiration of all political parties, and also retained undiminished the friendship of King Edward and all the Members of the Royal Family, said—

"This House to-day is a theatre which is being watched by the whole world. Let us conduct ourselves with that dignity that His Majesty himself is showing in this hour of his trial. Whatever be our regret at the contents of the message, let us fulfil his wishes to do what he asks, and to do it with speed ; and let no word be spoken to-day that the speaker or the utterer of that word may regret in days to come. Let no word be spoken that causes pain to any soul, and let us not forget to-day the revered and beloved figure of Queen Mary. . . . We have, after all, as guardians of democracy in this little island, to see that we do our work to maintain the integrity of the Monarchy—that Monarchy which, as I said at the beginning of my speech, is now the sole link of our whole Empire and the guardian of our freedom."

The feeling of deep disappointment throughout the country at the abdication was referred to by the Archbishop of Canterbury in an address at a religious service broadcast on the Sunday evening following the events above referred to. He said : "Seldom, if ever, has any British Sovereign come to the Throne with greater natural gifts for his kingship. Seldom, if ever, has any Sovereign been welcomed by a more enthusiastic loyalty." By those 'natural gifts for kingship,' and by those qualities of frankness, sympathy, and under-

standing which were so marked a feature of his character, King Edward Eighth will be assured of a lasting place in the hearts and memories of the present generation of his subjects.

In a touching farewell message, broadcast on the night of his abdication, 11th December 1936, he said: "I want you to understand that, in making up my mind, I did not forget the country or the Empire, which, as Prince of Wales, and lately as King, I have for twenty-five years tried to serve." His first words, in that message, were to declare his allegiance to his successor, and in that it is our pleasant duty to follow his example.

The second son of King George Fifth and Queen Mary, Albert Frederick Arthur George, was born at Sandringham on 14th December 1895, and so was within a few days of completing his forty-first year when he assumed the duties of sovereignty relinquished by his elder brother. Perpetuating the royal name of his revered and beloved father, he chose to be proclaimed as **George the Sixth**. Like his predecessors, his whole life has been spent in preparation for the duties and responsibilities which he is now called upon to undertake, and in the course of his training he has become widely known and greatly admired and beloved by his subjects at home and overseas.

The early days of His Majesty's career were dedicated to the Navy, and at the age of fourteen he entered the Naval Training College at Osborne. After two years there and other two at Dartmouth, and after sea experience for six months on the cadet-ship *Cumberland*, he was gazetted Midshipman, and appointed to H.M.S. *Collingwood*, the flagship of the First Battle Squadron, on which he was still serving when the Great War broke out in 1914. Two years later we find him acting as a junior officer on that vessel, and a few weeks before the Battle of Jutland he rejoined his ship, after a course of special training, and took part in that memorable engagement. Under such strenuous and dangerous conditions Prince Albert, as he then was known, proved his worth, and was mentioned in despatches for his coolness and courage under fire.

In 1918 the King became officially connected with the Air Service, having been appointed to the Naval Branch in that year, and he passed his flying tests as a qualified air pilot in July 1919, before being gazetted a Captain, R.A.F.

His Majesty, accompanied by his brother, now H.R.H. the Duke of Gloucester, went up to Cambridge University in 1919 to undertake an intensive course of study.

During the early years of his naval training the King showed a decided bent for mechanics, and so took to the practical side of his work with special avidity. This interest has stood him in good stead in social work in the industrial centres, which he has undertaken in a spirit of helpful and ungrudging zeal. He has always been specially interested in boys' organisations, and his many annual visits to the boys' camps, at which lads from every station of life are brought together to enjoy open-air recreations without distinction of class, have made him known to, and increased his popularity with, thousands of the younger generation. He has made himself conversant with the conditions under which the people are working in most of the principal industries of the country, by visiting the various districts where these are carried on, and wherever he has gone he has exhibited the tact, sympathy, and keenness to help which have come to be associated with members of the Royal Family. His special knowledge of these conditions became invaluable when he was appointed Chairman of the Advisory Council formed to assist in administering King George's Jubilee Trust, which was founded to benefit young people in the distressed areas.

It was in the Birthday Honours List of 1920 that King George Fifth conferred on the present King the dignity of a Dukedom, and from that time till his succession he was known as the Duke of York. The other titles which accompanied his new rank—the Earl of Inverness and Baron Killarney—associated him with both Scotland and Ireland.

An event which was enthusiastically welcomed by the people of Scotland, and which did much to enhance His Majesty's already great popularity north of the Tweed, was his choice of a Scottish bride. In January 1923 the Court Circular announced the betrothal of the Duke of York to



the Lady Elizabeth Bowes-Lyon, daughter of the Earl and Countess of Strathmore, to which the late King gladly gave his consent. Three months later, on 26th April, the marriage took place, amid great rejoicings, at the Abbey of Westminster. So, by the accession of her husband to the Throne, we rejoice again in a gracious and much-loved Queen, admired alike for her dignity, her winsomeness, and her unfailing sympathy with all who are in distress.

In the year following their marriage the Duke and Duchess of York began a series of tours which have done much to cement the friendship between the Dominions and the Homeland. In the summer of that year they paid an official visit to Northern Ireland, and before the close of the year had started on a tour to East Africa, which lasted for five months, Christmas being spent at Nairobi, the capital of the new colony of Kenya.

Their longest and most important official expedition was undertaken in 1927, when a visit was made to Australia and other British Dominions in the South Seas. Crossing the Atlantic in a British warship they visited Jamaica before passing through the Panama Canal *en route* for the Pacific and New Zealand. The main purpose of the tour was the opening of the new Australian Federal Parliament House at Canberra, and this was accomplished on the twenty-sixth anniversary of the inauguration of the first Federal Parliament by the late King George.

Amidst their many engagements the interests of Scotland have not been overlooked by their Majesties. Many visits, both formal and private, have been paid, the latter being dictated by Her Majesty's ancestral connection with the County of Angus and the fact of the home of her sister, the Lady Elphinstone, being in such close proximity to the Capital. The last of the official functions took place only about a fortnight before their accession, when the King was installed as Grand Master Mason of Scotland, and his Consort received the Freedom of the City of Edinburgh, an honour which some years previously had been conferred on His Majesty.

Another event which was specially honoured by the presence of the King and Queen was the union of the Church of

Scotland with the United Free Church of Scotland. In 1929, the year of union, His Majesty, as Duke of York, was appointed Lord High Commissioner to the General Assembly of the Church of Scotland, and took up residence, as is the custom of the King's representative on these occasions, at the Palace of Holyrood House. Later in the year their Majesties returned to Edinburgh to witness the actual union of the Churches.

In 1935, during the celebration of the Silver Jubilee of King George Fifth and Queen Mary, the King and Queen were again in Edinburgh as the leading figures in a memorable series of festivities.

A signal honour was paid to this Society when the King, then Duke of York, accepted the Presidency, to which he had been unanimously elected, for the year 1932-33. This was specially appropriate, as the Annual Show for 1933 was held at Dundee within the home county of his Consort. On that occasion their Majesties visited the Showyard on two days, Thursday and Friday, and spent a large portion of each day in inspecting exhibits and viewing events in the Parade Ring. The King presided at the General Meeting of the Society held within the Showyard, and also handed over the President's Champion Medals to the successful exhibitors. Throughout their visits they were everywhere received with an enthusiasm which was eloquent of the affection and popularity that they inspired, and there is no doubt that their presence very materially assisted in making the Dundee Show a record-breaking event as regards number of visitors and financial success.

[His Majesty's Address at the General Meeting was printed in full in the 'Transactions' for 1934.]

On the occasion of the 150th anniversary of its foundation, Their Majesties further honoured the Society by accepting Honorary Membership, to which they were elected at the Annual General Meeting held on 10th January 1934. Colonel F. J. Carruthers, in moving their election, emphasised the fact that their visit to the Dundee Show had been largely responsible for its phenomenal success.

Early this year the consent of the King to continue the Royal Patronage by accepting the office of Patron, vacated by King Edward Eighth, was intimated to the Society.

So much of the public life of Her Majesty Queen Elizabeth has been identified with that of her husband that it seems scarcely necessary to enlarge on her various social and charitable activities. The Queen Mother's wish, expressed in her message to the people immediately after the abdication of her eldest son, that we would bestow on the new Queen the same unfailing trust and affection which we had given to herself for the last twenty-six years, is certain of fulfilment, and it would indeed be a hard heart that Queen Elizabeth could not soften by her winning manner. As already mentioned, we take pride in the fact of the Queen being the daughter of an ancient and honourable Scots family, her father, the Earl of Strathmore, being the fourteenth in succession to the Earldom. Her mother is a great-granddaughter of the third Duke of Portland, so that in Her Majesty's person some of the best blood of the two nations is united. She was the tenth child of the marriage, and so enjoyed the privilege of family life in a household which has always upheld the best traditions of domestic happiness. Though born at the family seat in Hertfordshire, a considerable portion of each year of her early life was spent at Glamis Castle in Angus ; and when, during the war, the Castle was converted into a hospital, mainly for wounded Australian troops, the Lady Elizabeth made herself extremely popular with the patients.

It was on the 21st of April 1926 that the happy event of the birth of the first child of the King and Queen took place. H.R.H. Princess Elizabeth therefore became, at the early age of ten years, Heir-Presumptive to the Throne, and was thus faced with the long and arduous task of preparing herself, under the wise guidance of her parents and preceptors, for the responsible position she may one day be called upon to fill. That that day may be long deferred, and that the brightness of her youthful days may not be dimmed in the process, are the earnest hopes of all who, in the words of Queen Mary, have already taken the Royal children to their hearts. She will find, we doubt not, much happiness and compensation for the increasing difficulties of her life in the companionship of her sister, H.R.H. Princess Margaret Rose,

who can also claim to a remarkable degree the love and devotion of the British peoples.

At the Anniversary General Meeting of the Society held at 8 Eglinton Crescent, Edinburgh, on 6th January 1937, the following Loyal Address to His Majesty The King was<sup>1</sup> unanimously adopted, the Directors present upstanding :—

*UNTO THE KING'S MOST EXCELLENT MAJESTY.*

MAY IT PLEASE YOUR MAJESTY.—

WE, Your Majesty's most dutiful and loyal subjects, the Highland and Agricultural Society of Scotland, incorporated by Royal Charter, humbly desire to approach Your Majesty with an expression of our loyalty and devotion upon your accession to the Throne of this great Empire. We assure Your Majesty of our affectionate attachment and allegiance to Your Majesty's Throne and person, and also of our deep loyalty and devotion to Your Majesty's Royal and gracious Consort Queen Elizabeth.

We recall with gratitude that Your Majesty honoured the Society by accepting the office of President of the Society in the year 1933, and we remember with pride and satisfaction the visit of Your Majesty and Her Majesty Queen Elizabeth to the Society's Annual Show held at Dundee in that year. That visit exerted a stimulating influence on the life and work of the Society, and gave to its members an assurance of the deep interest taken by Your Majesties in the all-important industry of Agriculture in Scotland.

It is our earnest prayer that Your Majesties may long be spared to reign, in health and happiness, over a loyal, prosperous and united people.

Sealed with the corporate seal of the Society, and signed on its behalf by James P. Younger, Vice-President, J. P. Ross-Taylor, Chairman of the Board of Directors, and John Stirton, Secretary, this 6th day of January 1937.

J. P. YOUNGER, *Vice-President.*

J. P. ROSS-TAYLOR, *Chairman of Board of Directors.*

JOHN STIRTON, *Secretary.*

The Address was forwarded to H.M. Secretary of State for Scotland for presentation to His Majesty, and in due course a letter of acknowledgment was received, in which the Secretary of State said he had been commanded by the King to convey to the Society His Majesty's deep appreciation of the sentiments of loyalty and devotion to which the Address gave expression.

JOHN STIRTON.

## FAMOUS CLYDESDALE SIREs.

(THIRD SERIES—1919-1936.).

By W. ADAIR, Agricultural Editor of 'The Glasgow Herald, and  
A. N. M. BUCHANAN, 'The Scottish Farmer,' Glasgow

TWICE previously have the pages of the 'Transactions' contained an article embodying notes on "Famous Clydesdale Sires." The first series appeared in the 1897 volume and the second series in the 1919 volume. The author of both of these articles was the late Mr Archibald MacNeilage, whose dual rôle of Editor of 'The Scottish Farmer' and Secretary of the Clydesdale Horse Society enabled him, apart from his natural gifts as a writer, to do justice to his subject.

One of Mr MacNeilage's final sentences in the 1919 review of Clydesdale stallions was prophetic: "Twenty years after this, or thereby," he wrote, "it may be that another pen will be engaged in the duty which mine has twice essayed." It is now (January 1937) seven years since the breed lost this able and loyal secretary, under whose direction both of the present writers were trained as agricultural journalists.

### A STORY OF TWO REIGNS.

In the last series of notes upon Clydesdale stallions mention was made of several horses which had already established a name for themselves, but whose careers continued into the period now under review. Special notes were given of "Royal Favourite," "Baron of Buchlyvie," and "Revelanta." Accordingly, it is not necessary to return here to these representatives of the breed, though we shall hear again about "Baron of Buchlyvie" as the sire of "Dunure Footprint," whose influence as a sire extends right through the chapter of the breed's history that is now being examined. In the concluding chapter of the last article in the 'Transactions' it was suggested that "the dominating living sires at the present time are the two sons of 'Baron of Buchlyvie' ('Dunure Footprint' and 'Bonnie Buchlyvie'), with 'Apukwa,' 'Auchenflower,' and 'Royal Favourite.'" These horses did not belie the reputation then advanced on their behalf.

But if we take the whole of the period now under review, from 1919 up to 1936, the story to be told will largely concern two reigns: those, in the first instance, of "Dunure Foot-

print," and, in the second instance, of "Benefactor," both of whom were pre-eminent over successive periods. "Dunure Footprint's" reign as a sire dates from 1913 when he stepped into third place in the lists of parents of successful progeny, his own sire, "Baron of Buchlyvie," being then at the top, with "Apukwa" second. In the following year "Dunure Footprint" advanced to second place, and in 1915 he moved into the leading position and remained there unchallenged until 1927, a reign of thirteen years. After he had been displaced by "Benefactor," he continued to hold second place on the list until his death at the age of twenty-two years. Even last

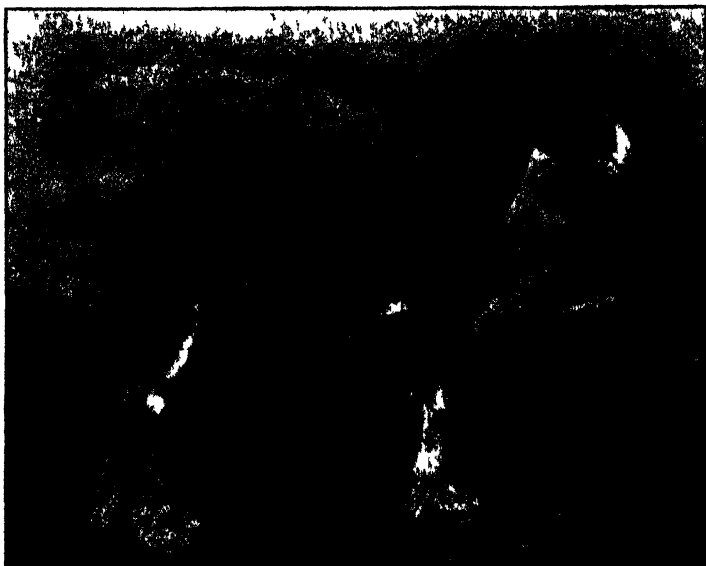


Fig. 1 —Clydesdale Stallion, "Dunure Footprint."

year his name still figures (the twenty-fifth occasion) on the list of sires of prize-winning progeny.

"Benefactor" had a similarly rapid rise to fame. He appeared for the first time on the list of successful sires for 1927 when he stood third, with "Footprint" still first, and with "Craigie M'Quaid" in second place. In the following year, 1928, "Benefactor" displaced "Dunure Footprint" from the leading position. "Benefactor's" own reign endured for seven seasons without interruption at the top of the lists of sires. Unfortunately, he died in 1932 at the age of ten years, while still comparatively in his prime. Yet for two more years his name appeared at the head of the list. He in turn was displaced in 1935 and again in 1936 by the young

horse "Craigie Beau Ideal." Accordingly, the two outstanding sires in the period covered by this review were undoubtedly "Dunure Footprint" and "Benefactor."

#### SIRES OF PRIZE PROGENY.

In this article we propose to preface our series of notes on individual stallions of the period with a table which has been compiled from the yearly lists of successful sires that appear in 'The Scottish Farmer' Album. This table, covering a period



Fig. 2.—Clydesdale Stallion, "Benefactor."

of eighteen years from 1919 to 1936, will impress readers at a glance with the fortunes of different sires in relation to prize progeny, as well as in the varying duration of their influence on the breed.

It is perhaps advisable at the outset of such a statement to stress the limitations inherent in these tabulated comparisons. While they offer in series the actual placings of sires, as based on records of prize progeny over the years under review, it has to be borne in mind not only that the basic data for these lists are confined to the recognised group of leading shows, such as the Scottish Stallion Show, Aberdeen Spring and Summer Shows, Kilmarnock, Ayr, Glasgow (summer), the Highland and Agricultural Society and the Royal Agricultural



Society, but that corresponding awards at each of these events, being reduced merely to figures, are treated as if they were all of equal importance. That, of course, is far from being a correct reflection of the facts.

A first prize or a championship at the Scottish Stallion Show, for instance, is of much more importance than similar awards at Aberdeen Spring Show. Likewise, a Highland Show championship is, in the realm of Clydesdales, of much greater value than a Royal Show championship, though both these awards figure here on equal terms. In the same way it is usually much more meritorious to win a female championship or class award at Kilmarnock or Ayr than a male award at these events, so far as competition decides merit, because the female entries are generally so much heavier. Having noted these qualifications, we present on an adjoining page the full list of successful sires in chronological order, giving opposite to the name of each horse a number signifying the order in which he stood in the yearly list, according to the showyard placings of his progeny in that season. We believe this is the first time that a table embodying such a range of records has ever been compiled. (See pp. 16, 17.)

It is not necessary to comment at any length upon this table. But the enduring period of "Dunure Footprint's" influence will be noted. "Botha's" record throughout the greater part of the period, during which he retained his place so near the top, will probably surprise readers who may have forgotten that he produced female stock of a very high order. The long range of "Auchenflower's" record as a sire, apart from his influence as inherited by "Dunure Footprint," is likewise impressive, as is the immediate rise to fame of "Benefactor" in the second section of the period.

#### INFLUENCES FROM FEMALE SIDE.

We have noted the importance of female progeny in "Botha's" record. "Dunure Footprint" and "Benefactor" likewise are worthily represented in their daughters. This leads us to stress the need for adequate recognition of the mare's part in successful mating of any breed. Little more than a year before this article was prepared, Mr William Dunlop, who owned the famous Dunure stud and who died in March 1936 at Rugby, England, delivered an address on Clydesdales at Milngavie, in course of which he gave credit to the dam of "Dunure Footprint" in the following sentence:—" 'Royal Darling,' when mated with 'Auchenflower,' produced 'Dunure Ideal,' that became the dam and chief cornerstone of 'Dunure Footprint.' " "Dunure Footprint" was his dam's first foal, and the dam's ~~own~~ individual merits are self-evident

from the fact that by the same sire she produced later four other winners of highest showyard honours: "Dunure Index," "Dunure Black Silk," "Dunure Chosen," and "Dunure Keynote."

In Mr William Meiklem's mare, "Maud of Begg," herself a daughter of "Dunure Footprint," we see another matron whose influence on the breed has been pronounced. She produced the champion sire "Benefactor" when mated with "Fyvie Sensation," and later when mated with "Woodbank Majestic" she produced the Highland Show, Cawdor Cup, and Brydon Shield winner, "Dunmore Supreme." In more recent years we have the notable fact that "Craigie Dalpeddar," the 2800 gns. reserve supreme champion at the 1936 Scottish Stallion Show, and the 1600 guineas "Craigie Trademark," winning three-year-old and reserve for the Kilpatrick Trophy at the same event, are both sons of the "Craigie Excellence" mare "Dalpeddar Remembrance." It is in the nature of things that the stallion's sphere of influence on the breed is ever so much wider than the mare's. But we must not overlook the merits and influence of the female parent, especially as the best stallions have the advantage in their career of being mated with the best available class of mares.

Mr William Dunlop traced the merit of "Dunure Footprint" back to his granddam, "Royal Darling," which had "Darnley" blood on both sides. Her dam, "Darling of Redhall," was by "Gartsherrie," a son of "Darnley," used extensively in Cumberland; while "her sire was 'Lord Lothian's' best breeding son, 'Royal Champion.'" "Lord Lothian" was by "Top Gallant." Mr Dunlop bought "Royal Darling" at weaning time from her breeder, Mr John Kerr, Redhall, Wigton, Cumberland. All showgoers who saw "Dunure Footprint's" dam, "Dunure Ideal," acknowledged her as a great sappy matron, possessing exceptional girth of body. She was exhibited first as a foal at Maybole, and she completed her showyard career as first prize yeld mare and reserve for the Cawdor Cup at the Paisley Highland Show in 1913.

Against this explanation on the part of Mr Dunlop of the influence of "Royal Darling" and of "Dunure Ideal" upon "Dunure Footprint" as a breeding horse, there are other experts associated with the breed who advance the argument that through his dam's sire, "Auchenflower," "Dunure Footprint" inherited, via "Montrave Mac" and "Montrave Maud," the potent influence of the famous "Moss Rose." Moreover, through "Auchenflower's" dam "Nora," "Dunure Footprint" acquired a double dash of the blood of "Lord Lothian," which figures on his maternal side also (as noted above), this horse being grandsire of "Royal Darling," the dam of "Dunure Ideal." Whichever of these lines of reasoning is accepted, in both cases the argument acknowledges the

## Sires of Prize Progeny, 1919 to 1936. THE NUMERALS

SIRE	1919	1920	1921	1922	1923	1924	1925	1926	1927
Dunure Footprint .	1	1	1	1	1	1	1	1	1
Apukwa . . .	2	2	7	13	12	14	13	..	..
Botha . . .	3	3	6	3	2	4	2	2	5
Kismet . . .	4	9	9	14	9	13	29	..	..
Bonnie Buchlyvie .	5	5	4	5	6	7	5	3	6
Baron of Buchlyvie .	6	10	..	16	16	..	..	..	..
Phillipine . . .	7	6	3	8	17	25	20	25	..
Royal Favourite .	8	7	13	12	18	18	..	..	..
Hiawatha Again .	10	11	10	6	7	9	32	9	13
Dunure Keynote .	11	23	41	44	46	..	..	..	..
Dunure Kaleidoscope	12	..	36	27	..	39	46	21	..
Auchenflower . .	19	4	5	4	4	6	4	6	23
Craigie Litigant .	..	12	2	2	3	2	3	7	19
The Dunure . . .	..	..	8	15	28	29	15	..	..
Dunure Independence	..	17	11	28	..	16	27	..	..
Revelanta . . .	14	..	12	20	19	42	..	..	..
Rising Star . . .	..	..	..	7	5	3	7	12	45
Fyvie Sensation .	..	..	..	..	10	5	12	8	18
Fyvie Enterprise .	..	..	..	..	..	8	9	16	12
Rising Tide . . .	..	..	..	..	..	10	11	10	37
Craigie Excellence .	..	..	..	26	29	19	6	5	4
Ardyne Refiner . .	..	..	..	..	..	34	16	11	8
Dunmore Hiawatha .	..	..	..	..	..	..	10	34	7
Craigie M'Quaid .	..	..	..	..	..	..	34	4	2
Brunstane Again .	..	..	..	..	..	..	..	18	17
Benefactor . . .	..	..	..	..	..	..	..	..	3
Dupplin Castle . .	..	..	..	..	..	..	..	30	9
Woodbank Majestic	..	..	..	..	..	..	..	..	..
Drumry Reformer .	..	..	..	..	..	..	..	..	..
Scotland's Marcellus	..	..	..	..	..	..	..	..	..
Renown . . . . .	..	..	..	..	..	..	..	..	..
Craigie Winalot . .	..	..	..	..	..	..	..	..	..
Douglas Castle . .	..	..	..	..	..	..	..	..	..
Craigie Ambition .	..	..	..	..	..	..	..	..	..
Craigie Beau Ideal .	..	..	..	..	..	..	..	..	..
Craigwell . . . . .	..	..	..	..	..	..	..	..	..
Dunmore Supreme .	..	..	..	..	..	..	..	..	..
Benedictine . . . .	..	..	..	..	..	..	..	..	..
Ardyne Monomark .	..	..	..	..	..	..	..	..	..

"Dunure Footprint" first appeared in the lists of sires in 1913. "Baron of Buchlyvie," of course, belongs to an earlier period though

SIGNIFY THE PLACE OF EACH HORSE ON EACH YEAR'S LIST.

1928	1929	1930	1931	1932	1933	1934	1935	1936	SIRE
2	2	2	2	3	5	8	8	23	Dunure Footprint
..	..	..	..	30	..	..	..	..	Apukwa
5	5	14	27	..	31	33	..	..	Botha
..	..	20	..	..	23	..	39	35	Kismet
4	8	8	8	13	15	..	..	..	Bonnie Buchlyvie
..	..	..	..	..	..	..	..	..	Baron of Buchlyvie
..	..	..	..	..	..	..	..	..	Phillipine
..	..	..	..	..	..	..	..	..	Royal Favourite
..	15	16	..	..	..	..	..	..	Hiawatha Again
..	..	..	..	..	..	..	..	..	Dunure Keynote
16	21	..	..	..	..	..	..	..	Dunure Kaleidoscope
..	40	15	..	43	41	..	..	..	Auchenflower
43	..	..	..	..	..	..	..	..	Craigie Litigant
..	..	..	..	36	48	..	..	..	The Dunure
26	22	..	32	..	..	..	..	..	Dunure Independence
..	..	..	..	..	..	..	..	..	Revelanta
36	..	..	..	..	..	..	..	..	Rising Star
23	..	..	..	..	..	..	..	..	Fyvie Sensation
12	35	..	37	..	..	..	..	..	Fyvie Enterprise
13	17	23	29	32	..	..	..	..	Rising Tide
6	9	27	..	..	..	..	..	48	Craigie Excellence
28	12	7	9	12	7	22	9	14	Ardyne Refiner
15	13	12	20	34	10	18	6	24	Dunmore Hiawatha
3	3	6	11	15	37	38	..	..	Craigie M'Quaid
8	4	4	3	11	8	40	25	17	Brunstane Again
1	1	1	1	1	1	1	2	5	Benefactor
10	6	11	14	8	11	11	10	16	Dupplin Castle
..	11	3	4	2	2	2	3	2	Woodbank Majestic
11	19	42	..	..	33	..	..	..	Drumry Reformer
..	10	5	6	10	16	10	28	19	Scotland's Marcellus
..	..	..	5	4	3	4	5	4	Renown
..	..	17	7	6	14	16	14	9	Craigie Winalot
..	..	..	23	5	4	3	4	3	Douglas Castle
..	..	..	10	9	12	13	7	51	Craigie Ambition
..	..	..	..	..	..	5	1	1	Craigie Beau Ideal
..	..	..	..	..	38	26	15	7	Craigweil
..	..	..	..	..	6	6	11	8	Dunmore Supreme
4	..	..	..	..	..	9	20	6	Benedictine
..	..	..	..	..	9	14	17	10	Ardyne Monomark

shown on this roll of sires until 1923. "Royal Favourite," also belonging to the earlier period, remained on the list till 1924.

influence of the female strains in the pedigree of "Dunure Footprint."

This survey serves as a general introduction to the leading sires of the period under review. Appended are individual notes on the breeding and careers of the most prominent horses.

#### AUCHENFLOWER (12,007).

It is rather curious that when last these notes were penned "Montrave Mac" (9958), and his most famous son "Auchenflower" (12,007), received only passing mention. There is no doubt that they represented an epoch-making period in the welfare of the breed. "Montrave Mac" himself lived until he was twenty-six and "Auchenflower" died in 1926, aged twenty-five years. "Auchenflower" on his sire's side combined in succession the blood of "Montrave Mac," "Macgregor," and "Darnley," and on the other "Lord Lothian," "Top Gallant," and "Darnley." Just as in the early days of the breed's recorded history the mating of the progeny of "Prince of Wales" and "Darnley" was accepted policy, so too was the mating of the progeny of "Dunure Footprint" and "Auchenflower," the cross back to "Auchenflower" concentrating the desirable characteristics that came from "Prince of Wales" through the "Moss Rose" tribe on the one hand and "Lord Lothian," "Top Gallant," "Gartsherrie," and "Sir Walter Scott" on the other.

The prepotency of that line is apparent to-day through "Dunure Footprint" and "Craigie Beau Ideal." "Auchenflower" was bred by Messrs C. & R. Wilson on the farm from which he takes his name at Ballantrae in 1902. He did not enjoy an outstanding showyard career, but he was second at Ayr as a two-year-old and fourth at the Inverness Highland in 1911. In 1925, when in his twenty-fourth year, he was shown among the veterans at Glasgow Stallion Show and attracted much attention. Undoubtedly his greatest achievement was in leaving the great mare "Dunure Ideal" (21,283), which became the dam of "Dunure Footprint" and of the latter's full brothers "Dunure Keynote," "Dunure Index," and their full sisters "Dunure Chosen" and "Dunure Black Silk." "Auchenflower" was also the sire of two Cawdor Cup champions: "Wells Mescal" in 1922 and "Monk Gladys" in 1925, while he sired the dam of three Cawdor Cup champions, "Dunure Ideal," the dam of "Dunure Footprint" and "Dunure Chosen," and "Dunure Roseway," the dam of "Dees Rosetta." "Auchenflower" ended his days in the stud of Mr David Adams, Auchencraig, Dumbarton, in 1926. He was a strongly made, virile specimen, with a grand fore-end, beautiful broad hard bone and a big strong foot, and these characteristics he passed on. There is no doubt that

he played a big part in shaping the destiny of the breed, and his heritage is enduring.

**" RISING TIDE " (17,454).**

Of the sons of " Auchenflower " (12,007) that have achieved prominence one of the chief is " Rising Tide " (17,454), which was bred by Mr William Dunlop, Clune, St Quivox, and was owned during his great career by Mr Thomas Clark, Muirtons, Perth. As a premium horse he had an outstanding career, having travelled in many parts of Scotland and England. In the show-ring he was more than ordinarily successful, having been first at Ayr, thrice third at Glasgow Stallion Show, and twice first and champion at Perth; while at the Hawick Highland Show in 1914 he stood second to the great show horse "Baron's Seal." His name appears for nine years in succession in the breeding list. His greatest legacy was " Craigie Excellence " (19,971), that was six times first and thrice champion at Glasgow Stallion Show and winner of the Cawdor Cup, Meiklem Gold Cup, and Brydon Shield. Another of his famous sons was the popular " Royal Tide " (19,550), that won the Glasgow premium in 1920 and was first as an aged stallion at Glasgow Stallion Show in 1924. In 1926 both " Craigie Excellence " and " Royal Tide " appeared in the veteran class at the Stallion Show and they were placed first and second. Several of the female progeny of " Rising Tide " also won distinction. One of them, " Evening Tide " (52,150), the dam of the Cawdor Cup champion, " Powerful Link " (58,789), was sold by public auction at the dispersion of the Rothiebrisbane stud in 1935. She was then twenty-one years old.

**" CRAIGIE EXCELLENCE " (19,971).**

The most notable son of " Rising Tide " (17,454) was undoubtedly Mr James Kilpatrick's " Craigie Excellence " (19,971), which was bred by Mr John More, Gogar Mains, Blairlogie, Stirling, and was foaled in 1917. His dam was " Polly of Fordhead " (33,417), by " Airies Prince " (10,667), a son of " Sir Everard " (5353); while his grand dam, " Blossom of Fordhead " (18,064), was by " Royal Favourite " (10,630). In the showyard " Craigie Excellence " had a record that was little short of remarkable. He was shown eight years in succession at Glasgow Stallion Show and was six times first, twice second, and thrice supreme champion. On the two occasions when he was second, he was defeated by " Rising Star " and " Fyvie Sensation." In addition, he secured the triple crown—the Cawdor Cup, Meiklem Gold Cup, and Brydon Shield. As a premium horse " Craigie Excellence " was always in marked request and was a general favourite, particularly

in Aberdeenshire. His sons included "Craigie Exquisite" (21,053), the Cawdor Cup champion of 1925, the good breeding "Craigie Sundial" (20,725), whose dam was "Craigie Sunray" (52,466), and, the most notable of all, "Woodbank Majestic" (21,393), one of the leading sires of the present day. His most distinguished daughter is the great breeding mare "Dalpeddar Remembrance" (51,957), the dam of the high-priced young stallions "Craigie Dalpeddar" (22,255) and "Craigie Trademark" (22,444), to which reference is elsewhere made. As an individual, "Craigie Excellence" was never just the biggest when standing, but he was big when lying. It was his action, particularly behind, that always carried him through, and, viewed from behind, it was a treat to see him going.

#### "CRAIGIE LITIGANT" (19,071).

In his earlier years, one of the most prominent sons of "Baron of Buchlyvie" (11,263) was Mr James Kilpatrick's "Craigie Litigant" (19,071), a beautifully balanced horse of pleasing character and attractive action. He was foaled in 1915 and was bred by Mr James Anderson, Pitcarry, Bervie. His dam was "Favourite Queen" (32,062), by "Royal Favourite" (10,630). In his day "Litigant" was a showyard favourite. His winnings included four firsts at the Stallion Show, in addition to the Cawdor Cup, Diamond Jubilee Cup, and Brydon Shield, and he was also first at the Dumfries Highland Show in 1922. He had a comparatively short life, as he died in 1923. His name appears on the breeding list nine years in succession, and he stood second to "Dunure Footprint" three times, and twice he was third also. He was more impressive as a sire of females than of males, and his progeny includes two Cawdor Cup champions, "Raysun" (56,197) in 1923 and the lovely mare "Craigie Ella" (56,917), now in New Zealand, where she has been several times champion and has made an enviable reputation as a breeder. "Raysun" had been beaten as a yearling and two-year-old by "Ophelia" (55,513), another daughter of "Craigie Litigant," but she emerged as winner at the Inverness Highland Show when classed against "Ophelia," which became reserve to her for the cup. "Craigie Litigant" also was sire of "Bow Mermaid" (55,394), the dam of the Cawdor Cup winner "Craigie Exquisite" (21,053).

#### "BOTH A" (19,026).

A glance at the table accompanying this article shows that in the period under review "Botha" (19,026), bred and owned by Mr James Gray, Birkenwood, Gargunnoch, held a

proud place in the list of successful sires. Like his stable companion "Apukwa," "Botha" had the great advantage of being used extensively in a large and select stud (the late Mr Stephen Mitchell's at Boquhan), and he was also freely used by Mr J. E. Kerr in his renowned stud at Harviestoun, Dollar. His name first appeared in the breeding list of 1918, and thereafter he was thrice second and thrice third to "Dunure Footprint," his greatest rival being "Apukwa." Like "Dunure Footprint" he had a long reign, his name appearing among the first half-dozen until 1929.

He was foaled in 1915. His sire was "Baron of Buchlyvie" and his dam "Darrell" (21,360) was by "Sylvander" (10,933). Unlike "Apukwa," "Botha" was shown somewhat extensively. He had a great career as a yearling, being first and reserve for the Cawdor Cup at Glasgow Stallion Show—a high distinction for a yearling; first at the Royal Northern Spring and Summer Shows, first at Kilmarnock and Ayr, and second at the Manchester Royal Show. In subsequent years he was second at the Scottish Stallion Show in 1917, and third in 1918 and 1919. As a sire he was much more successful in his female progeny than in males. He was the sire of "Harviestoun Alanna" (58,072), with which Mr J. E. Kerr secured the Cawdor Cup at the Dumfries Highland Show in 1930, and he was also sire of "Ruetha" (58,175), dam of the Stallion "Royal Gift" (21,914), which after a successful Scottish career was exported to Australia and died last year as the result of an accident. Two other well-known prize-winning daughters of "Botha" were the stylish filles "Boquhan Elsie" and "Peace."

#### "BONNIE BUCHLYVIE" (14,032).

When last these notes were written in 1919 "Bonnie Buchlyvie" (14,032) received only a short mention. He was then, of course, little more than at the beginning of his great career. He was bred by Messrs W. Stirling & Sons, Darlingfield, Gordon, and at an early age passed into the ownership of Mr William Dunlop, Dunure Mains, Ayr. The story has already been told of how Mr Dunlop had intended naming his ideal horse "Dunure Footprint," and the fact that "Bonnie Buchlyvie" first bore that name is a good enough indication as to his individual merit. There is no doubt at all that "Bonnie Buchlyvie" quite lived up to all that was expected of him. As "Dunure Footprint" he was bought by Mr Robert Brydon for his select Seaham Harbour stud, but his name was afterwards changed to "Bonnie Buchlyvie." When that stud was finally dispersed in 1915, "Bonnie Buchlyvie" was bought by Mr James Kilpatrick, Craigie Mains, Kilmarnock, at 5000 gns.,



a price that was only exceeded by the £9500 paid for his sire, "Baron of Buchlyvie." In the hands of Mr Brydon, "Bonnie Buchlyvie" won the Cawdor Cup at Glasgow Stallion Show in 1909. He was not shown for the Brydon Shield that day, as it was donated by his owner. In 1916, however, he was awarded the Shield when owned by Mr Kilpatrick. That put the copestone to his career, for he had already been first at the Royal Show in 1908 and at the Highland Show in 1911. As a sire his name first appeared in 1912 and his reign lasted without a break until 1933, so that he had a long and eminently successful career. In 1912 he was sixth on the list, and he remained in the leading half-dozen until 1928, except in 1924 when he was seventh. His contribution was indeed notable and his progeny were numerous and well above the average. He was the sire of two Cawdor Cup champion stallions, "Ardendale" (18,993) in 1919 and "Craigie M'Quaid" (20,724) in 1924, and he was sire of "St Mona" (47,924), the dam of the famous 1928 Stallion Show champion and the winner of the 1929 Cawdor Cup, "Craigie Winalot" (21,322). Of his other most famous sons perhaps the best known were "Phillipine" (18,044) and "Craigie Ambition" (21,195). His numerous female progeny included the famous mare "Mary Howitt" (38,670), dam of the noted stallions "Dunure Measure" (20,744), "Nessdale" (20,399), "Bryandale" (19,641), and "Balcairn Footnote" (20,701). "Mary Howitt" lived until she was well over twenty years of age. Another notable female was the good breeding "Craigie Sunray" (52,466), which had a notable career as a yearling, two-year-old and three-year-old, including first at the Royal and Highland Shows and reserve for the Cawdor Cup. "Bonnie Buchlyvie" outlived most of his contemporaries. He led a busy and a useful life and died at Craigie Mains in 1927, full of years and honour. His breeding was interesting. Foaled in 1906, his sire was "Baron of Buchlyvie" and his dam the beautiful "Queen of Beauty" (14,850), by "Macgregor" (1487), while his granddam, "Lady Louisa" (12,036), was generally regarded as one of the best of the female progeny of "Prince of Wales" (573). His third dam was the good breeding mare "Violet of Portencallie" (9503), by "Darnley."

#### “ PHILLIPINE ” (18,044).

Of the greatest sons of "Bonnie Buchlyvie," the senior, "Phillipine" (18,044), was bred by Mr J. G. Phillips, Baggrah, Carlisle, and was foaled in 1912. He was bought for the Seaham Harbour Stud as a yearling. In the showyard he was thrice first at the Royal Show and first as a yearling at the Highland Show. He was thrice sold at a high figure. At the

Seaham Harbour dispersion he was bought by the late Mr George A. Ferguson, Surradale, Elgin, at 2300 gns. In his hands he was first as a veteran at Glasgow Stallion Show. When the Surradale stud was dispersed in 1922 Phillipine was sold at 1250 gns., and the following year at Aberdeen he was sold at 650 gns. He was a beautiful show horse that filled the eye, a grand big massive specimen with abundant weight and substance, but as a breeder he hardly lived up to expectations. In 1921, his best year, he stood third in the list of sires, nine of his progeny having secured nineteen class prizes. His name appears in the list for eight years. He died in 1924 at the age of thirteen years, when owned by Messrs R. & J. Chapman, Johnston, Gartcosh.

“CRAIGIE AMBITION” (21,195).

The other outstanding son of “Bonnie Buchlyvie,” “Craigie Ambition” (21,195), had a successful showyard career and has figured prominently as a breeder. He was bred by Messrs J. & F. Beaton, Mains of Glack, Pitcaple, Aberdeenshire, and was foaled in 1924. His dam was by “Dunure Footprint,” and his granddam by “Scotland Yet” (14,839). In his youth he was the outstanding show horse of his generation and had all but an unbeaten career. He was twice champion at the Royal Show, twice reserve champion at the Highland Show (being beaten for the supreme honour each time by “Benefactor”), once reserve champion and once supreme champion at Glasgow Stallion Show, and he also won numerous other honours. Although never just near the top of the breeding list, “Craigie Ambition” has had a notable breeding career. His progeny includes “Craigie Cameronian,” that won the Meiklem Gold Cup in 1932 and was afterwards exported to Australia, “Craigie Realisation,” the outstanding yearling and Cawdor Cup champion of 1933, afterwards exported to Canada, and “Craigie Gaiety,” another Canadian champion. He is also the sire of “Craigie Dalpeddar.” (22,255), twice reserve champion at Glasgow Stallion Show, which at the great Craigie Mains sale in 1936 made the highest price, 2800 gns. At that sale five of “Craigie Ambition’s” progeny averaged £756, and he himself, although twelve years old, made 200 gns. He has retained in a remarkable degree the beauty of conformation and wealth of straight silky hair which characterised his early showyard appearances.

“CRAIGIE M’QUAID” (20,724).

Of the sons of “Bonnie Buchlyvie” some may have been more prolific than “Craigie M’Quaid,” but none has made the

same contribution as he in leaving an outstandingly potent son to carry on. As parent of the leading sire of the present day—"Craigie Beau Ideal"—"Craigie M'Quaid" has a place in history all to himself. He was bred by Messrs M'Quaid Brothers, Drumjargon, Whauphill, and was foaled in 1921. His dam was "Queen Elizabeth" (42,476), by the triple Highland Show champion "Everlasting" (11,331), one of the most successful and most popular sons of "Baron's Pride" (9122). "Craigie M'Quaid" had a successful if somewhat chequered showyard career. As a yearling he was first and champion at the Cambridge Royal Show; as a two-year-old second to "Dupplin Castle" at the Stallion Show, and first and male champion at Glasgow Summer Show when "Dupplin Castle" and "Brunstane Again" were second and third in the class. In the early part of 1924 he came out in wonderful form as a three-year-old and carried all before him at both Glasgow Stallion Show and Glasgow Summer Show, winning the Cawdor Cup and Brydon Shield at the former and beating "Benefactor" at both for the supreme award. At the Perth Highland Show, however, he suffered defeat at the hands of "Brunstane Again" (20,717). As an aged horse in 1925 he again won the Stallion Show championship, but suffered defeat at the Glasgow Highland Show, this time at the hands of "Flower of the Day" (20,914). That was his last showyard appearance. As stud horse at Craigie Mains he was in great demand. He is the sire of two Cawdor Cup champions—"Craigie Beau Ideal," the winner in 1930, and "Mary Rose" (57,881), the winner in 1928. He is also the sire of "Craigie Fragrance" (58,559), the dam of "Craigie Realisation," the Cawdor Cup winner in 1933, and his full brother "Craigie Aspiration," both of which are now in Canada. His name entered the breeding list in 1925 and after a modest start he jumped up to second place to "Dunure Footprint" in 1927, and in 1928 and 1929 he was third, his great showyard rival "Benefactor" having then displaced "Dunure Footprint" at the top.

#### "APUKWA" (14,567).

The most successful breeding son of the great "Hiawatha" (10,067) is generally acknowledged to be "Apukwa" (14,567). As a sire the name of "Apukwa" first appeared in 1911 when he was eighth off the list of sires of prize-winning progeny. In 1912 and 1913 he stood second to "Baron of Buchlyvie," and in 1914 he was third, "Baron of Buchlyvie" being first and "Dunure Footprint" second. In subsequent years "Apukwa" ran a close race with "Dunure Footprint," "Baron of Buchlyvie," "Bonnie Buchlyvie," and "Auchenflower," his best performance being in 1919 and 1920 when he was second to

"Dunure Footprint." He had a remarkably long and successful career. Bred by Mr Robert Mailer, Redhall, Gargunnoch, in 1906, he made his name in the stud of Mr James Gray, Birkenwood, Gargunnoch, and finished up in the stud of Mr George M'Dowall, Briarbrae, Stranraer, where he died in November 1928. His dam, "Royal May" (16,899), was by "Royal Favourite" (10,630), one of the leading breeding sires of his generation—a son of "Royal Gartly" (9844), which was of "Prince of Wales" descent on both sides. It is curious that while Mr Gray was one of the keenest exhibitors of his day, "Apukwa" was never much shown. He was first, however, at Glasgow as a yearling. It was perhaps fortunate for "Apukwa" that he was owned by Mr Gray, who was Clydesdale adviser to the late Mr Stephen Mitchell of Boquhan, Kippen, in whose stud "Apukwa" had more opportunities than most young horses to make his name.

He appeared at a fortunate time, because the progeny of "Baron's Pride" were then in their heyday, and, being something of the natural cross for such mares, he carried on the work of his sire. That in some measure explained his popularity and his terms were up as high as £10 and £15. He left many notable animals, including both Cawdor Cup champions of 1915, "Lady Betty," bred and owned by Mr Andrew Brooks, North Elphinstone, Tranent, and "Drumcross Radiant" (18,323), bred and owned by Mr John Samson, Drumcross, Bishopton. He was also sire of the lovely mare "Destiny" (53,928), a prominent winner at the Highland, Stranraer, and Dumfries Shows, the dam of "Craigweil" (21,739), a son of "Benefactor," which at the moment is prominent as a sire, his progeny including "Lucinda," the mare that has been twice first and twice reserve for the Cawdor Cup at the Highland Show. "Apukwa" also was sire of "Ailsa" (54,770), dam of "Benedictine" (21,836), another of the outstanding sons of "Benefactor."

Of his numerous other progeny special mention might be made of "Amanda" (45,586), dam of "Dunure Reluctance" (20,325); the mares "Heather Mint" (44,874) and "Craigie Sylvia," full sisters; "Rademon Robina" (39,504), the dam of the "Dunure Footprint" mare, "Rademon Sunshine" (53,818), from which is descended the two present-day prize-winning young stallions, "Craigie Dalpeddar" (22,255) and "Craigie Trademark" (22,444); and he likewise was sire of "Dunure Voice" (38,671), dam of the mare "Farleton Essay" (50,028) and of the good breeding stallion "Farleton Footprint" (20,752). Two of his best-known sons were "Ardlaw Pride" (18,212) and "Abercromby Appin" (19,596). "Apukwa" lived until he was twenty-two years old and was thus another splendid example of Clydesdale longevity.

### "HIAWATHA AGAIN" (18,765).

Another of the outstanding sons of "Hiawatha" was "Hiawatha Again" (18,765), bred by Mr James Kinloch, Ardoch, Cardross, Dumbartonshire. His dam was "Jean White II." (21,450), a daughter of "Prince of Erskine" (9647), and a good breeding mare which numbered among her progeny "Chattan Again" (14,626), that won the Glasgow Premium and also the open class at Glasgow Stallion Show in 1908; and also "Jean of Ardoch," own sister to "Hiawatha Again," a mare that won numerous prizes including second at Kilmarnock and Ayr, third at the Highland Show, five times champion at Barrhead. "Hiawatha Again" was not shown extensively, but his winnings included twice second at Glasgow Stallion Show. Like his sire before him he was something of a showyard 'swell,' and had the action which characterised the "Hiawatha" family. He travelled in Aberdeenshire for five seasons. Unlike his contemporary "Apukwa," "Hiawatha Again" had to make his name as a premium horse, and this he did in no uncertain fashion, and for close on ten years he was among the first dozen in the breeding list. He, too, was a natural outcross to mate with females of the "Baron's Pride" and "Auchenflower" lines, and when mated with daughters of "Dunure Footprint" he was particularly successful. His greatest achievement, of course, was the outcome of being mated with the "Dunure Footprint" mare "Lady Ivo" (40,779), which produced the champion "Fyvie Sensation." Among his other progeny were the great weighty sire "Hiawatha Print" (21,088), frequently in the short leet for the Glasgow premium; "Dandaleith Quintin" (20,731); "Fyvie Enterprise" (20,581); "Tristan" (20,478), champion at the Derby Royal Show; "Ardoch Again" (20,856) and "St Albion" (21,126), the sire of the champion "Craigie Winalot" (21,322). "Hiawatha Again" unfortunately did not enjoy a long career, but in his lifetime he exercised a potent influence on the breed.

### "FYVIE ENTERPRISE" (20,581).

Of the sons of "Hiawatha Again" (18,765), a typical example of the race was "Fyvie Enterprise" (20,581), which was bred by Mr James Durno, Bothiebrishane, Fyvie. He was bred on the same lines as the unbeaten champion "Fyvie Sensation" (20,042), having been sired by "Hiawatha Again" (18,765), while his dam, "Empress of Fyvie" (45,105), was by "Dunure Footprint." As a three-year-old he was stud horse at Brunstane, after which he was bought by Mr George A.

Ferguson, Surradale, Elgin, and when his stud was dispersed at Lanark in 1922 "Fyvie Enterprise" was bought for 680 gns. by Mr James Clark, then at Netherlea, Cathcart. In 1922 he began his showyard career with third prizes at the Stallion Show and at Aberdeen; while he was first at the Dumfries Highland Show of the same year. In his day he held many important premiums including that of the Scottish Central district in 1924. With his first crop of foals he was eighth on the list of breeding sires and ninth the following year. His progeny were useful without being outstanding.

"FYVIE SENSATION" (20,042).

In some respects the outstanding show horse of the past twenty years was "Fyvie Sensation" (20,042), which was bred by Messrs J. & P. Donald, Lethen, Fyvie, in 1918. His sire was "Hiawatha Again" (18,765), and his dam was the "Dunure Footprint" mare "Lady Ivo" (40,779). In his younger days it was fully expected of him that he would carry on the "Hiawatha" tradition, and so far as the show ring is concerned he fulfilled this promise, but as a breeder he was a disappointment. He began his career in the hands of Mr A. M. Montgomery, Netherhall, Castle Douglas. As a yearling his initial success was only fourth at Aberdeen Spring Show, but at Aberdeen Summer Show he was first and reserve to "Rising Star" for the junior championship. As a two-year-old he came into his own, being first at Ayr, and champion at the Darlington Royal Show and also at the Aberdeen Highland Show. His only appearance as a three-year-old was at the Stirling Highland Show where he was again first and champion. As a four-year-old he competed against the aged stallions at Glasgow Stallion Show and was first in his class, winner of the Cawdor Cup, Brydon Shield, and supreme championship. In 1923 he again appeared at the Highland Show (Inverness), won his class, and his third successive championship, his son "Benefactor" standing reserve. That was his last appearance in the showyard.

Like many famous horses "Fyvie Sensation" began his breeding career in Aberdeenshire, having been hired well ahead for 1922 and 1923. It was natural that breeders should follow his doings with more than usual interest. He was not by any means the first stallion that was slow to start. His own sire, an example of this trait, was spared to live down his reputation as a young horse and in later years proved quite prolific. "Fyvie Sensation," however, failed to respond. When the Netherhall stud was dispersed at Lanark in 1925 his reputation was generally known. In the sale-ring there were breeders who were prepared to accept the gamble. His

buyer<sup>1</sup> was Mr E. G. Thomson of Callands, West Linton, who paid 1000 gns. In subsequent years the horse was given every chance, but the gamble was not all it might have been. "Fyvie Sensation" was six times in the list of successful sires, his best year being 1924 when he was fifth. In producing "Benefactor" he made amends for his lack of fertility, and for that son alone he has gained a niche in Clydesdale history peculiarly his own. He was a typical representative of the "Hiawatha" race, and combined in a degree that was remarkable the characteristics of "Dunure Footprint." He had size and substance, a grand fore-end and magnificent hindquarters. His big wide open feet and his straight silky 'plumage' were impressive and he betrayed no lack of masculine character. His failure in fertility was something of a mystery.

#### "BENEFACITOR" (20,867).

Foaled in April 1922, "Benefactor" died at the end of March 1932 on the eve of what promised to be another successful breeding season for him at the stud of his owners, Messrs T. & M. Templeton, Sandyknowe, Kelso. He was thus several days short of completing ten years of age when he died. He was bred by Mr William Meiklem, Bennochy Park, Kirkcaldy, at the farm of Begg there, and his dam, as already stated, was "Maud of Begg" (50,902) by "Dunure Footprint," second dam "Gentle Annie of Begg" (35,975) by "Revelanta" (11,876), while his third dam was by "Royal Favourite" (10,630). His pedigree goes back to his seventh dam, "Jean Douglas" (646) by "Young Campsie" (929), winner of the Glasgow prize in 1869. His dam, "Maud of Begg," was also dam of "Dunmore Supreme," the One Hundredth Highland Show champion and winner of the Brydon Shield and Cawdor Cup of that year (1931).

The sire of "Benefactor," as noted earlier, was the triple Highland Show champion "Fyvie Sensation" (20,042). "Benefactor" was one of the first crop of foals by this sire. As a foal he was purchased for the Netherhall stud by Mr A. M. Montgomery, Castle Douglas. At the Netherhall stud dispersion sale in 1925 "Benefactor" topped the price-list at 4400 gns., the third highest auction price ever paid for a Clydesdale. His buyers were Messrs Templeton. He was thus three years old when acquired for Sandyknowe stud. As a yearling he won his class at the Scottish Stallion Show and just missed the Cawdor Cup on the casting vote of an umpire, this trophy going to "Flashdale." In the same season he was champion at Ayr, Edinburgh, and Newcastle Royal Show, while at Inverness Highland Show he won his class and was reserve to his sire for male championship. At his first show

in Messrs Templeton's hands he won the male championship when his stud companion, the mare "Monk Gladys," won the Cawdor Cup, and at Kelso Highland Show in the following year the same two animals won both male and female championships for Sandyknowe stud. "Benefactor's" show career seemed complete, but he had a notable 'comeback' when his owners sportingly entered him for the Scottish Stallion Show in 1930. He was then eight years old, and he won the veteran class, the Meiklem Gold Cup (of which the donor was his breeder), the Brydon Shield, and the supreme championship. He suffered no class defeat in eleven appearances, thus repeating the record of his sire. He was never more admired for his breed character and the strength through his body than on this last showyard appearance at Scotstoun.

As a breeder it is recognised that he conferred a strong fore-foot upon all his progeny. This was perhaps his most valuable special attribute as a sire, though his general legacy was to impart weight and depth to the breed. He achieved instant success in breeding. He travelled Fyvie and Strathbogie in 1925, Scottish Central in 1926, and Stranraer and Rhins in 1927, thenceforward standing at stud. Two of his first crop of foals, "Renown" and "Ardyne Monomark," were at the head of all yearling classes in season 1927. His progeny in the following year won six championships, and their record now includes seven Cawdor Cups, five of which were won by daughters and two by sons.

The five daughters of "Benefactor" that won the Cawdor Cup for their sex were: "Fyvie Primrose," "Lane Lucky Girl," "Onoway," "Faraway," and "Powerful Link." His two Cawdor Cup-winning sons were: "Beneficial" and "Watchword." Other outstanding progeny of "Benefactor" include: Males—"Renown," "Ardyne Monomark," "Beneficent," "Britannia," "Royal Factor," "Beneficence" (exported to South Australia), "Bensign," "Fyvie Supreme," "Benefaction," "Benedictine," "Benemerito," "Royal Gift," "Black Diamond," "The Factor," "Windlaw Topsman," "Eminence," "Benevolence," "Benamir," and "Craigweil": Females—"Lane Benefactress," "Benona," "Lane Mayflower," "Abercromby Ella," "Lane Snowflake," "Rose Marie," "Owaissa," "Pamela," "Marigold" (full sister to "Faraway" and exported to Canada), "Harmonessa," "Belle o' Borgue," "Branchal Sunshine," "Queen o' Borgue."

#### "DUNURE FOOTPRINT" (15,203).

"Dunure Footprint's" wonderful career is already acknowledged in our introduction to this article. Foaled on April 19, 1908, "Dunure Footprint" died in July 1930 at Bea



Farm, Dumbarton, where he had finished his career in the hands of Mr David Adams, Auchencraig. He had been in Mr Adams's possession for nearly six years after the disposal of the remnant of Dunure Mains stud. At death he was thus twenty-two years and three months old, a ripe age for any stallion. His record at stud was amazing. His phenomenal fertility may be judged from a fact related to us just after the death of "Dunure Footprint" by a prominent East of Scotland breeder. This breeder used "Dunure Footprint" from the time he served a few mares as a two-year-old. Altogether he sent forty-three mares to "Footprint," and of that number no fewer than forty-one proved in foal after first service. As a stud leader "Footprint" was a gold-mine to Mr Dunlop, who personally revealed in print, less than two months before his own death, that at the height of his fame "Footprint's" fees were sixty guineas for service and sixty guineas when the mare proved in foal.

He was bred by Mr Dunlop at Dunure Mains, Ayr, and was sired by the £9500 "Baron of Buchlyvie" out of "Dunure Ideal," regarding whom some notes have already been given in this article. "Baron of Buchlyvie" had "Baron's Pride" as his sire, "Sir Everard" as grandsire, "Top Gallant" as great grandsire, and "Darnley" as great great grandsire. "Baron of Buchlyvie's" dam was by "Knight Errant," a son of "Top Gallant." Thus from his sire "Dunure Footprint" inherited a double dash of "Top Gallant" blood, which also was represented in his own dam through "Royal Darling." "Baron of Buchlyvie" was hired to Glamis district in his second season and Mr Dunlop sent "Dunure Ideal" to be mated to him there, "Footprint" being the outcome of that mating.

He was black in colour with more white through his body than fashion dictates. Three of his legs were white and one leg (near fore) was black. "Footprint" was a horse of beautiful balance, with incomparably finely shaped hind-legs, well-set fetlocks and fine straight hair, attributes that characterised all his progeny. In his Milngavie lecture Mr Dunlop showed warm resentment of an Australian critic's reference in print to "Footprint's" colour as 'blue-roan,' with white on part of body and over half of face. His colour was not perfect; indeed, it was often possible to identify his numerous progeny by a tendency to grey hairs and white flecks through the body, particularly on the lower flank and underline. But no one would place any blemish of colouring against his great services to the breed. Mr Dunlop told how he had reserved in his mind the name "Footprint" for his best colt foal, and had actually bestowed it upon the colt that became "Bonnie Buchlyvie" before the late Mr Robert Brydon of Seaham Harbour bought that colt from him. Later Mr Brydon

desired to change the name to "Bonnie Buchlyvie." "Thus," said Mr Dunlop, "the remarkably appropriate name, as if by some unaccountable reason, was to be reserved for the unprecedented stallion, 'Dunure Footprint.'"

First at Kilmarnock autumn show as a foal, "Dunure Footprint" kept his lead at the Scottish Stallion Show in the spring as a yearling, was second at Kilmarnock, and first at Ayr in the same season. For four years—as one, two, three and four-year-old—he won successively at the Scottish Stallion Show. As a yearling he won both Royal and Highland Shows, was first as a three-year-old at the Highland Show, and was second to "Fyvie Baron" as a four-year-old at the Highland Show, the last time he was exhibited.

It is as a sire that his name is inscribed on the scroll of fame, not only as a Clydesdale, but as a stallion of any breed. His prize-winning progeny were legion. He sired five male and five female winners of the Cawdor Cup, and he also sired the dams of twelve winners of that coveted trophy. Thus he figures as sire, or as sire of dam, of no fewer than twenty-two Cawdor Cup champions. His nearest rival in this record is his own grandsire, "Baron's Pride," with eighteen to his credit against "Dunure Footprint's" twenty-two.

The sons of "Dunure Footprint" that won the Cawdor Cup were: "Dunure Refiner" (1914), "Kismet" (1917), "Rising Star" (1920), "Flashdale" (1923, and exported to Australia), "Brunstane Again" (1927). His Cawdor Cup-winning daughters were: "Rosalind" (1916), "Wells Lady Ray" (1919), "Veda" (1920), "Farleton Lady Alice" (1921), and "Orange Blossom" (1926, and exported to Australia).

Other noted progeny of "Dunure Footprint" include: "Dupplin Castle," "Dunraven," "Dunure Measure," "Weathervane," "Dunduff Chancellor," "Cragston Mount Royal," "Farleton Footprint," "Scotland's Select," "Perfect Print," and "Craigie Everlasting": "Cherry Blossom," "Dunure Wish," "Blackwood Dawn," "Nyassa Queen," "Nisbet Harmony," "Harviestoun Felicia," "Langlands Blossom," "Rue Mayflower," "Wells Lorna," "Abercromby Emma," "Glack Margaret." His daughters also include: "Dunure Glad Eye," the record-priced female of the breed. She was bought by the late Mr William Dunlop for 1850 gns. at the Dene House sale in April 1919.

### "KISMET" (18,417).

A notable son of "Dunure Footprint" was "Kismet" (18,417), foaled in 1913 and bred and owned by Mr John P. Sleight, St John's Wells, Fyvie. His dam was the well-known home-bred mare "Moir" (33,747), that won the Cawdor

Cup in 1909. She was by "Baron's Pride," while her dam was "Thelma" (15,268), tracing back to "Mains of Airies" and "Darnley." "Kismet" had a notable showyard career at all the important shows and secured the Cawdor Cup and Brydon Shield at Glasgow Stallion Show in 1917; while at the Victory Highland Show at Edinburgh in 1919 he was first and reserve male champion. At the Stallion Show in 1929 he staged a wonderful 'comeback' and when sixteen years of age he was fourth among the veterans.

He was a horse of a handsome stamp with incomparably beautiful hind-legs, and with the straight silky hair that characterised the progeny of his sire, and, while a stylish mover, he was a trifle deficient in depth of rib. As a breeder he was more successful in his female progeny than in males. His breeding career started when there were few shows on account of the war. In 1919 he claimed fourth place on the list of successful sires and he remained fairly well placed for four years thereafter and, while there were blanks between 1924 and 1929, he came back again in 1930 and figured again in 1933 and 1935. Most of his breeding career was spent in various districts of Aberdeenshire, but he had also seasons in East Lothian and in Orkney. As the sire of "Amir" (20,495), the sire of "Douglas Castle" (21,620), he is still exercising a big influence on the breed.

#### "RISING STAR" (19,836).

Another of the notable sons of "Dunure Footprint" was Mr Thomas Clark's "Rising Star" (19,836), also bred by Mr John P. Sleight, foaled in 1917, and whose dam "Wells Mayflower" (44,057) was by "Star o' Doon" (16,103). In the showyard he early distinguished himself. As a two-year-old he was first and champion at the Highland Show at Edinburgh in 1919. Horses such as "Kismet," "Craigie Litigant," and "Phillipine" figured in the aged class at that show. "Rising Star" was considered probably one of the best two-year-olds ever shown at a Highland Show. A prominent Clydesdale breeder at that time is known to have stated that if the owner had been prepared to sell him he would have given a record price for "Rising Star." As a three-year-old he was first in his class and won the Cawdor Cup and Brydon Shield and was reserve to "Craigie Litigant" for the supreme championship at Glasgow Stallion Show. His breeding career was as stud horse at Pitlandie. He had a somewhat short career, having died in 1926. His best year was in 1924, when he stood third on the breeding list to "Dunure Footprint" and "Craigie Litigant." That year five of his progeny secured twelve class prizes, including two championships and four firsts. The

most notable of these was the big handsome weighty mare "Margaret," that was first at Glasgow, the Highland Show, and the Royal Show.

"DUNRAVEN" (20,309).

Although "Dunraven" does not figure prominently on the list of breeding sires he has been one of the most popular breeders of geldings. He was bred by Mr James Templeton, Auchenairston, Maybole, and was sired by "Dunure Footprint" out of "Dyroch Queen" (36,565). Her sire was by "Blyth Thomas" (12,868), male champion at the Derby Royal Show in 1906 and third at the Edinburgh Highland Show of 1907. He was a son of "Prince Thomas," first and champion at the Stirling Highland Show of 1900. "Dunraven" was purchased at the Netherhall stud dispersion sale by Mr Samuel Young, Balloch, Croy, for 800 gns. He was a powerful type, standing about eighteen hands high and weighing over one ton when in his prime. "Dunraven" won numerous prizes, including first at the Derby Royal Show of 1921 as a three-year-old, first at the Perth Highland Show of 1924 as an aged horse, and, after being second at the Stallion Show thrice, he was first as a veteran in 1928. One of his last showyard appearances was at Aberdeen Spring Show when he was beaten for the championship by "Renown," but was, nevertheless, officially awarded the cup. He was most successful as a sire of geldings, which were invariably endowed with size and substance.

"BRUNSTANE AGAIN" (20,717).

A prominent son of "Dunure Footprint," "Brunstane Again" (20,717) was bred and, during the greatest part of his career, was owned by Mr Robert Park, Brunstane, Portobello. His dam, "Marseillaise" (35,946), combines on her sire's side the blood of "Hiawatha" and on her dam's side that of "Baron's Pride." "Brunstane Again" had a successful showyard career, having at one time or another secured about everything worth winning, including the Cawdor Cup, Meiklem Gold Cup, Brydon Shield, and Highland Show championship. He won the Cawdor Cup at the Edinburgh Highland Show in 1927, and that day Mr Park also won the corresponding trophy for females with "Brunstane Again's" daughter "Brunstane Phyllis." With his reputation "Brunstane Again" had the pick of the districts in which to travel, and he held many important premiums both in Scotland and England. He was an ideal type of a draught horse of the old-fashioned, short-legged order, combining size, weight and

substance, well furnished limbs and a sound wearing foot. These qualities he passed on to his progeny. As a breeding sire he was most successful in 1929, 1930, and 1931, when his progeny placed him twice fourth and once third on the list of breeding sires. The most outstanding of these was undoubtedly the mare "Brunstane Phyllis," which after her pronounced showyard successes here was shipped to Canada, where she has maintained her reputation, but it was unfortunate that she proved disappointing as a breeder. "Brunstane Again" left some useful stock, but none of them has achieved outstanding showyard distinction.

**"DUPPLIN CASTLE" (20,747).**

Of all the sons of "Dunure Footprint" it would be difficult to say which was the most outstanding as a sire. None of them even distantly approached the sire's record either in quality of progeny or in prolificacy. From an examination of the breeding list it might be claimed that "Dupplin Castle" was the most successful. This horse was bred by the late Lord Forteviot at Dupplin Castle, Perthshire, in 1921, and is owned by Messrs R. & J. Chapman, Johnston, Gartcosh. His dam was "Blossom of Dupplin" (47,730), a mare which won several prizes locally. She was a daughter of "Signet" (16,816), which in turn was got by "Allandale" (12,418) out of a "Marcellus" (11,110) dam. His second dam was "Queen of Littlefolla" (36,682), a daughter of "Hyacinthus" (13,531) by "Royal Edward" (11,495), the sire of "Rosetta" (21,770), which was the dam of "Drumcross Radiant" (18,323). "Royal Edward" had the distinction of having once beaten the £9500 "Baron of Buchlyvie."

In his breeding "Dupplin Castle" is not outstanding, but as an individual he is well above the average and has all along been a general favourite with ringsiders. A massive black, with four white legs, he is well endowed with weight and substance and from the head to behind the shoulder he would be exceedingly difficult to fault for Clydesdale character; indeed, few horses in recent times could excel "Dupplin Castle" in head, neck, and forearm. In the show ring the merit of "Dupplin Castle," it is often contended, was never adequately recognised. He was first at the Stallion Show as a yearling and retained his place as a two-year-old. As an aged stallion he was again twice first. As a six-year-old he was second and reserve for the Brydon Shield. At the Highland Show he was twice second—at Kelso in 1926 and at Edinburgh in 1931—being defeated on the latter occasion by his own son "Satisfaction" (21,293).

He began his breeding career in the Scottish Central district

in 1924. Since then he has invariably been amongst the first dozen in the lists of sires, and last year he was sixteenth and also was first as sire of prize-winning geldings. After a period of years as a premium stallion "Dupplin Castle" was retained as stud horse at Johnston, and could always be depended on to have over 100 mares in a season. In one season he had 166 mares and left no fewer than 121 foals. His progeny have been prominent prize-winners, particularly at local shows. He is the sire of "Satisfaction" (21,293), winner of the President's Medal and Cawdor Cup at the Aberdeen Highland Show in 1928. Another of his noted sons is "Roths Castle" (21,673), which, like his sire, is well endowed with weight and substance, and which has been well placed among the aged and veteran stallions at Glasgow Stallion Shows. Other sons include "Mereside Castle" (21,779), "Border Minstrel" (22,414), which secured the Isle of Man £200 premium at the Scottish Stallion Show in 1936, the big weighty "Drumlanrig Castle" (21,749), "Tibbers Castle" (22,054), "Monkland Castle" (22,323), "Misty Law" (exported to Canada), and "Cavalcade" (22,247), that went to Australia and was sold for 650 gns. He is also the sire of numerous prize-winning females. Among geldings, his most noted sons were "Stirling Castle," that won innumerable prizes; and "Carrick," that was reserve champion at the 1936 Highland Show and was afterwards exported to U.S.A. "Dupplin Castle," now in his sixteenth year, is still fit and fresh.

#### "ARDYNE REFINER" (19,606).

The North of England has for long been regarded as a Clydesdale stronghold. One horse which has greatly enhanced the Clydesdale reputation of that part of the country during the past two decades is "Ardyne Refiner" (19,606). This horse was bred by Mr Henry Murdoch at Broomberry, Ayr, and was foaled in 1917. His pedigree is rather interesting and probably gives the clue to his breeding prowess. His sire was the Cawdor Cup champion "Dunure Refiner" (17,872), a son of "Dunure Footprint" (15,203) and of the "Hiawatha" mare "Montrave Remembrance" (32,284), and thence back in a straight line to the famous "Moss Rose" (6203). His dam, "Broomberry Lady Mac" (43,729), was by "Montrave Mac" (9958), and thus he has a double dash of "Moss Rose" blood, and in his back crosses he combines in a remarkable degree the blood of "Darnley" and "Prince of Wales," while his pedigree is liberally endowed with Cawdor Cup champions. "Ardyne Refiner" was of the commercial as opposed to the showyard order and did not figure prominently in the show ring. He was second as a foal at Kilmarnock Foal Show in

the hands of the breeder. As a yearling he was fourth at Glasgow Stallion Show and eighth in a class of twenty-seven as a two-year-old.

Only twice was he hired—to the Perth district as a three-year-old and to the Howe o' the Mearns as a four-year-old—since when he has been stud horse at the Beeches, Tarraby, Carlisle, for his present owner, Mr Joseph A. Armstrong. "Ardyne Refiner" has exercised a powerful influence all along, and he has had good seasons every year and always leaves a big percentage of foals. With Carlisle as his centre his progeny do not get the chance to shine at the Scottish Shows, which regulate the breeding list, as do the progeny of purely Scottish horses, but despite that "Ardyne Refiner" figures prominently in the list, having been among the first dozen several times. He has been equally successful as a sire of females as of males, while as a sire of geldings he has an outstanding reputation, having been at the top of the list more than once. His most notable females were "Virol," one of the outstanding winners of the past decade, and her full sister "Vera," together with "Robeline," "Sunrise," "Harviestoun Nell," and the filly "Dees Miss Watson" that was sold in New Zealand in 1936 at 500 gns. His most notable stallions are "Hawkrigg Eldorado" (22,138), "Arlosh Refiner" (21,161), and "Mereside Refiner" (21,898), while his greatest gelding was the famous winner "Joe," now in Canada. "Ardyne Refiner" is now twenty years old, and is still fit and fresh and far from finished.

#### "GRENADIER" (21,496).

It is not often that horses that have no showyard career to commend them figure prominently as sires. But that a prize-winning record is not essential to a successful stallion is proved in the case of "Grenadier" (21,496). His life was short but notable, and his influence should abide. Bred by Mr John Cocker, Hill of Petty, Fyvie, his pedigree is of more than usual interest. His sire was "The Alien" (20,473), which was first at Glasgow as a three-year-old and first at the Newcastle Royal Show as a four-year-old, a nicely balanced horse, not too impressive as a breeder; he was a son of "Hiawatha Again." "Grenadier's" dam was "Bet Baronson" (49,919), and she was got by "Hugo Baronson" (17,301), first at the Hawick Highland Show of 1914, and a son of "Sir Hugo" (10,924). The latter made his name in the Park Mains stud of the late Mr William Taylor, and was an outstanding son of "Sir Everard" (5353), sire of "Baron's Pride."

In the hands of Mr Robert Todd, Wellbrae, Glassford, "Grenadier" had a great career, particularly in Lanarkshire.

He was not one of the fashionable order, but when year after year his progeny, geldings in particular, commanded attractive prices at Lanark sales, breeders had to take notice. Geldings, in the very nature of things, must possess strength and weight, and as there is nowadays a great desire to combine these merits along with quality, "Grenadier" won his chance. "Grenadier," moreover, was almost a complete outcross to the prevailing lines of breeding, and was accordingly a valuable blend at a time when Clydesdale blood is tending to be too circumscribed. It was unfortunate that this career was cut short through an accident just as he was beginning to attract mares of the better class. While none of his female progeny has as yet attained to any outstanding distinction, he was the sire of two notable stallions: "Largo" (22,012), that was exported to Australia, and "Hyperion" (22,483), a son of the famous Cawdor Cup and Highland Show champion "Onoway" (60,061), that was second at the Highland Show and reserve champion at the Royal Show as a yearling. Another son is "Drumsagart" (22,667), full brother to "Hyperion." He was exported to the New South Wales Government in 1936. "Maxwell," the three-year-old gelding that was first at Kilmarnock, Ayr, and the Royal Shows in 1936, was a son of "Grenadier."

"SCOTLAND'S MARCELLUS" (21,383).

On both sides of his pedigree "Scotland's Marcellus" (21,383) is closely related to the great "Hiawatha." His sire was "Dunmore Hiawatha" (20,740), a son of "Hiawatha Again," which won many prizes in his younger days and was stud horse in the Bridgebank stud of Mr A. J. Marshall. His dam, "Lady Marcellus" (46,788), was by the noted Cawdor Cup champion "Marcellus" (11,110), which was got by "Hiawatha." "Scotland's Marcellus" won many prizes in his younger days, including second at the Stallion Show, first and reserve champion at Ayr and Glasgow, and first at the Edinburgh Highland Show as a three-year-old. As an aged stallion he was second at the Aberdeen Highland Show in 1928, and in 1930 he was first and reserve to "Craigie Beau Ideal" for the supreme award at the Dumfries Highland Show. That was his last appearance in the showyard. He was bred by Mr David Blair, Littleinch, Wormit, and was foaled in 1924. As a youngster he was bought by Mr T. Purdie Somerville, Sandilands, Lanark, and when the Sandilands stud was dispersed following the death of Mr Somerville, "Scotland's Marcellus" was bid up to 1050 gns. when he was withdrawn. However, shortly afterwards he was bought by Messrs A. Montgomery & Co., Jordieland, Kirkcudbright, and remained



with them until 1936, when he returned to the ownership of Mrs Purdie Somerville. He was only twice hired—to Aberdeenshire in 1928 and to Kirkeudbright in 1932—most of his time having been spent as stud horse at Jordieland. As an individual “Scotland’s Marcellus” was well above the average, having much of the gaiety of the “Hiawatha” tribe, a grand masculine outlook, good quality bone and a nicely set hind-leg. Great things were expected of him as a breeder and he might have proved exceedingly popular on account of his breeding. He started off in good style, but he just hardly maintained the pace. He was fairly well placed in the breeding list, having been four times among the first half-dozen. His most outstanding son has been “Windlaw Marcellus” (21,934), owned by Mr James Clark, Windlaw, Carmunnock, a show-yard contemporary of “Craigie Beau Ideal,” whose numerous successes include the winning of the Kilpatrick Shield in 1935, after having been reserve in 1932, 1933, and 1934; and reserve for the Meiklem Gold Cup in 1932.

#### “DUNMORE SUPREME” (21,753).

An outstanding show horse of the past decade was “Dunmore Supreme” (21,753), bred by Mr William Meiklem, Bennoch Park, Kirkealdy, and owned by Mr John Johnston, Dunmore Home Farm, Falkirk. Unfortunately for his owner he died in 1935. He was a particularly well-bred horse. His sire was “Woodbank Majestic,” while his dam was the great breeding mare “Maud of Begg” (50,902), dam of “Benefactor.” “Dunmore Supreme” was the sensational yearling of his day, though he was beaten at Ayr by “Beneficence,” afterwards exported to Australia. As a two-year-old he was only once beaten, and as a three-year-old he put the copestone to his career by securing the Brydon Shield at Glasgow Stallion Show and standing reserve for the championship to “Craigie Beau Ideal,” while at the One Hundredth Highland Show at Edinburgh he was first in his class and secured the President’s Medal and Cawdor Cup. With his first crop of foals in 1933 he stood sixth on the breeding list, a position which he occupied again in 1934. He was eleventh in 1935 and eighth in 1936, but so far none of his progeny has attained to outstanding distinction.

#### H. & A. S. CHAMPIONS SINCE 1919.

As this article ranks as a record of prominent horses of the breed during the period under review, we may present a list of the winners of the President’s Medal for Clydesdale colts or stallions at Highland Shows held since 1919. This

list denotes the centre at which the show was held, the name of the winning animal, and his age at that date.

1919	Edinburgh	.	Rising Star, two years old.
1920	Aberdeen	.	Fyvie Sensation, two years old.
1921	Stirling	.	Fyvie Sensation, three years old.
1922	Dumfries	.	Craigie Litigant, seven years old.
1923	Inverness	.	Fyvie Sensation, five years old.
1924	Perth	.	Baron's Eclipse, one year old.
1925	Glasgow	.	Benefactor, three years old.
1926	Kelso	.	Benefactor, four years old.
1927	Edinburgh	.	Brunstane Again, six years old.
1928	Aberdeen	.	Satisfaction, three years old.
1929	Alloa	.	Craigie Winalot, four years old.
1930	Dumfries	.	Craigie Beau Ideal, one year old.
1931	Edinburgh	.	Dunmore Supreme, three years old.
1932	Inverness	.	Beneficial, one year old.
1933	Dundee	.	Craigie Realisation, one year old.
1934	Glasgow	.	Watchward, two years old.
1935	Aberdeen	.	Craigie Magnificent, one year old.
1936	Melrose	.	Beneficial, five years old.

"Fyvie Sensation" had the distinction of thrice being the supreme male exhibit at Highland Shows in this period, and his son "Benefactor" was twice champion, while his son "Beneficial" in turn was twice champion, a fine family record within this span of eighteen years.

#### CONCLUDING CHAPTER.

This review is concerned with the record of horses of a generation immediately past, or with horses whose breeding careers are approaching completion. Records of horses now in their prime have been left for posterity's comments. We shall merely note that prizes awarded at last year's leading shows entitle the following horses to occupy the first twelve places on the list of leading sires for the season: (1) "Craigie Beau Ideal" (21,856), (2) "Woodbank Majestic" (21,393), (3) "Douglas Castle" (21,620), (4) "Renown" (21,525), (5) "Benefactor" (20,867), (6) "Benedictine" (21,836), (7) "Craigweil" (21,739), (8) "Dunmore Supreme" (21,753), (9) "Craigie Winalot" (21,322), (10) "Ardyne Monomark" (21,423), (11) "Craigie Sundial" (20,725), (12) "The Factor" (22,053). This is the second year in which "Craigie Beau Ideal," a son of "Craigie M'Quaid," appears at the head of the list as the successor to "Benefactor," now in fifth place.

In the present year (1937), "Craigie Beau Ideal's" progeny opened with the highest distinction, his four-year-old son, "Craigie Reformer," one of his first crop of foals, securing the supreme championship at the Scottish Stallion Show.

Second on the 1936 list of successful sires is the "Craigie Excellence" horse, "Woodbank Majestic," whose progeny likewise have opened the 1937 Show season with pronounced success, a yearling son, "Strathore Imperial," having secured reserve supreme championship at the Scottish Stallion Show.

Others near the top of the 1936 list of successful sires are: in third place the "Amir" horse, "Douglas Castle"; "Benefactor" in fifth place has three sons on either side of him, "Renown" (one of his first season's crop of foals) in front of him, and "Benedictine" and "Craigweil" following in sixth and seventh places.

A note of warning on the need for maintaining strength and weight in the breed was sounded at the end of the last article that was published of this series in the 1919 'Transactions.' Towards the close of the period now under review there was evidence that the aim of breeders to produce size and weight, and not to neglect the upper structure in the earnest quest for close movement and sound feet and ankles, is being attained.

The view of the men who buy horses for the lorry must ever be respected. Hence we close on an encouraging note. A Glasgow contractor, whose memory ranges as far back in Clydesdale history as anyone's to-day, commended last season's two-year-old colts and geldings for their size and substance and welcomed them as definite evidence that top weight is definitely being improved.

## CAWDOR CUP RECORDS.

### TROPHY WINNERS AND THEIR SIREs SINCE 1892.

The Cawdor Cup is still regarded as the 'Blue Riband' of the Clydesdale world, and it might not be inappropriate to include here a short résumé of the animals and owners who have from time to time secured it. The trophy was first presented in 1892. The existing cup for males is the seventh; while the present cup for females is the sixth. In the early days of the competition the trophy for males was competed for at Glasgow Stallion Show and the trophy for females, with two exceptions, at the Highland Show. In 1926 the trophy for males was transferred to the Highland Show, and since then both trophies have been competed for there.

### THE DOMINATING SIREs.

As the sire of Cawdor Cup winners "Baron's Pride" holds pride of place, having sired no fewer than eleven winners,

two males and nine females, and yet he himself was never a winner. In addition, "Baron's Pride" sired seven mares that produced Cawdor Cup champions, three being the dams of female winners and four the dams of male winners. It will thus be seen that the record of "Baron's Pride" in connection with the Cawdor Cup covers no fewer than eighteen animals. That record, however, is eclipsed by "Dunure Footprint." He himself won the trophy in 1910 and in subsequent years he became the sire of ten winners—five stallions and five females. In addition, no fewer than twelve mares sired by him became the dams of Cawdor Cup champions, eight of them having been the dams of female winners and four the dams of male winners, so that in all his record covers no fewer than twenty-two animals as against eighteen by "Baron's Pride."

The next most successful sire in Cawdor Cup history is "Benefactor," which shares with "Prince of Wales" the distinction of being the sire of seven Cawdor Cup champions. Neither of these two, however, was successful in leaving a mare to propagate his record, but "Benefactor" may yet do so, for many of his female progeny are still in their prime as breeding animals. "Prince of Wales" was the sire of four males and three females that won the trophy, while "Benefactor" sired two male and five female winners. The next most successful sire was "Baron of Buchlyvie," which sired six winners—five males and one female; while "Hiawatha" (which himself won the trophy four years in succession, setting up a record which, however, cannot now be equalled as the conditions governing the award of the trophy were altered after his spectacular victory) was the sire of three winners—two males and one female, and he also sired two mares that produced Cawdor Cup champions. The accompanying table (p. 45) shows at a glance the record of the leading stallions.

#### THE TROPHY FOR MALES.

The first winner of the trophy for males was "Prince Alexander" (8899), a son of "Prince of Wales" (673) and the "Darnley" (223) mare "Jennie Black" (8100), bred by Mr Alex. Black, Craigencrosh, Stoneykirk, and owned by Mr William Renwick, Meadowfield, Corstorphine. The outstanding performance in winning the trophy is that of Mr James Kilpatrick, Craigie Mains, Kilmarnock. He registered his first victory with "Prince of Kyle" (7155)—another son of "Prince of Wales" and a "Darnley" mare—in 1893, and in subsequent years he won the trophy for males no fewer than nine times, and he also once secured the trophy for females, his winner being "Craigie Ella" (afterwards exported to New Zealand) in 1924. Mr Kilpatrick's other winners were:

"Oyama" in 1906, "Craigie Litigant" in 1918, "Craigie Excellence" in 1921, "Craigie M'Quaid" in 1924, "Craigie Exquisite" in 1925, "Craigie Winalot" in 1929, "Craigie Beau Ideal" in 1930, "Craigie Realisation" in 1933, and "Craigie Magnificent" in 1935. The 1925 winner won outright the fifth Cawdor Cup for Mr Kilpatrick, and he also became the owner of the sixth cup in 1935. He is the only breeder or exhibitor who has been successful in securing possession of two Cawdor Cups.

It may also be interesting to record that the other great Clydesdale trophies—the Brydon Shield and the Meiklem Gold Cup—have also been won outright by Mr Kilpatrick, he having secured final possession of the first Brydon Shield presented by the late Mr Robert Brydon, The Dene, Seaham Harbour, to Glasgow Agricultural Society to encourage size, substance, and soundness in Clydesdale stallions; and also the second Brydon Shield which was presented by Mrs Brydon and family to replace the first shield. The Meiklem Gold Cup which was presented by Mr William Meiklem in 1926 to Glasgow Agricultural Society to take the place of the Cawdor Cup which was that year transferred to the Highland and Agricultural Society was won outright by Mr Kilpatrick in 1932, and his name appears thrice on the second cup which was presented in 1933.

The first Cawdor Cup for males was won outright by Mr Peter Crawford, Carruchan, Dumfries, after being in competition for six years. His winners were "Prince of Carruchan" (8151) in 1894 and 1897, and "Royal Gartly" in 1895 and 1896. The second cup was held only by "Hiawatha" (10,067), he having won it four years in succession, once when owned by Mr Matthew Marshall and thrice when owned by Mr John Pollock, then in Paper Mill Farm, Langside, Glasgow. After 1902 the conditions were altered to four wins with different animals. In consequence, the succeeding trophies were somewhat longer in competition. The third trophy, however, lasted only six years, and eventually went to Mr Matthew Marshall, Bridgebank, Stranraer. His winners were "Marcellus" (11,110) in 1903, "Hiawatha Godolphin" (12,602) in 1905, "Baron Kitchener" (10,499) in 1907, and "Memento" (13,100) in 1908. Mr Marshall was also the owner of "Macaroon" (15,936), that won in 1911. The life of the fourth trophy was eight years and its ultimate owner was Mr William Dunlop, Dunure Mains, Ayr, who secured it with "Dunure Footprint" (15,203) in 1910, "The Dunure" (16,839) in 1913, "Dunure Refiner" (17,872) in 1914, and "Dunure Kaleidoscope" (18,335) in 1916. Mr Dunlop secured the trophy for males on four occasions and he was also successful in securing the trophy for females with "Dunure Chosen" (37,306) (full sister to "Dunure Footprint") in 1914. He was also breeder

of "Wells Mescal" that was the winner for Mr John P. Sleigh, St John's Wells, Fyvie, in 1922. The fifth and sixth trophies which went to Craigie Mains lasted nine years and ten years respectively.

### THE TROPHY FOR FEMALES.

The outstanding record on the female side is that of Mr J. E. Kerr of Harviestoun, Dollar, who has secured the trophy no fewer than six times. He was also the breeder of "Harviestoun Baroness," which won for Mr W. M. Ritchie, Balcairn, Old Meldrum, in 1912; of "Scotland Yet" (14,839), which won the trophy for males in 1912 when shown by Mr T. Purdie Somerville, Sandilands, Lanark; and of "Flashdale" (20,576), which won for Mr W. More Black, Coldstream, Victoria, Australia, in 1923. Mr Kerr's winners were "Pyrene" (19,757), "Chester Princess" (16,371), and "Nerissa," three daughters of "Baron's Pride," that won three years in succession in 1906, 1907, and 1908, winning outright the third trophy. In subsequent years Mr Kerr also won in 1911 with "Cicily" (29,843), in 1912 with "Harviestoun Phyllis" (37,631), and in 1930 with "Harviestoun Alanna" (58,072). "Chester Princess" it is worth noting was also dam of the other winners "Scotland Yet" and "Harviestoun Phyllis." The only other mare which herself won the trophy and bred two winners was the famous "Moss Rose," her winning daughters being "Queen of the Roses" and "Montrave Maud." "Duchess of Challoch," while not a winner herself, was the dam of two winners, "Prince of Carruchan" and "Irene"; "Dunure Ideal" was the dam of two winners—"Dunure Footprint" and "Dunure Chosen"; and "Maud of Begg" was also the dam of two winners—"Benefactor" and "Dunmore Supreme."

As with the males, the Cawdor Cup competition for females began in 1892, and the first winner was the "Prince of Wales" mare "Irene," full sister to "Prince of Carruchan," bred by Mr John M'Caig, Challoch, Stranraer, and owned by Mr James Lockhart, Mains of Airies, Stranraer. This cup was won outright after five years by Sir John Gilmour, Bart., of Montrave, Leven, his winners being "Moss Rose" (6203) in 1894 and 1895, and her daughter, "Montrave Maud" (11,786), in 1896. Her other daughter, "Queen of the Roses," won for Mr Leonard Pilkington, Cavens, Kirkbean, in 1893 and "Montrave Maud" won again in 1898. The second trophy also lasted five years, and went to Mr Herbert Webster, Morton House, Fence Houses, Durham, who won with "Lady Lothian" (13,319) in 1897, 1900, and 1901, and with "Lady Victoria" (14,582) in 1899. The fourth cup had the record life of thirteen years, and it eventually became the property of Mr John P.

Sleigh, whose four winners were "Moirá" (33,747) in 1909, "Wells Lady Ray" (44,060) in 1919, her daughter, "Raysun" (56,197), in 1923, and "Wells Mescal" in 1922. Mr Sleigh was also breeder and exhibitor of "Kismet" (18,417), a son of "Dunure Footprint" and the "Baron's Pride" mare "Moirá," that won the trophy for males in 1917, and he was also breeder of "Rising Star" (19,836), which won the trophy for Mr Thomas Clark in 1920.

After being in competition for ten years the fifth trophy for females was won outright by Mr Alexander Murdoch, C.A., East Hallside, Newton, in 1933. His quartette was "Orange Blossom" in 1926, "Mary Rose" in 1928, "Onoway" in 1931, and "Faraway" in 1933. Mr Murdoch was also the actual owner of "Fyvie Primrose," which won in 1929, but the transfer was not completed in time to secure the victory to him. On the existing cup Mr Murdoch has already had his name inscribed as owner of the winner last year, "Rosetta," and he at one time owned the mare whose name is first on the present cup, "Charm o' Borgue," which won for Lord Dalziel in 1934.

Messrs T. & M. Templeton, Sandyknowe, Kelso, have also a notable Cawdor Cup record, having secured the trophy thrice for males and twice for females, and they were also breeders of Mr Alexander Murdoch's "Faraway." Messrs Templeton's male winners were "Benefactor" in 1926 and his two sons, "Beneficial" in 1932 and "Watchword" in 1934; while their female winners were "Monk Gladys" in 1925 and "Fyvie Primrose" in 1929.

On three occasions both trophies were won by one exhibitor in the same year. In 1914 Mr William Dunlop won it for males with "Dunure Refiner" and for females with "Dunure Chosen." The winner of both trophies in 1924 was Mr James Kilpatrick with "Craigie M'Quaid" among the males and "Craigie Ella" among the females; while in 1927 Mr Robert Park, Brunstane, Portobello, won for males with "Brunstane Again" and for females with that horse's daughter, "Brunstane Phyllis."

#### LIST OF WINNERS' SIREs.

The following table presents a list of sires of winners of the Cawdor Cup since the institution of that competition in 1892, showing the number of immediate sons and daughters of each horse that have won the trophy, together with the number of mares sired by each horse whose progeny have been winners of the trophy :—

Sire.	Males.	Females.	Sire of Winner's Dam.	Total.
Dunure Footprint . . .	5	5	12	22
Baron's Pride . . .	2	9	7	18
Benefactor . . .	2	5	..	7
Prince of Wales . . .	4	3	..	7
Baron of Buchlyvie . . .	5	1	..	6
Hiawatha . . .	2	1	3	6
Auchenflower . . .	..	2	3	5
Prince Charlie . . .	..	2	3	5
Prince Robert . . .	4	..	1	5
Lord Lothian . . .	..	3	1	4
Royal Favourite . . .	1	1	2	4
Tom . . .	..	..	4	4
Bonnie Buchlyvie . . .	2	..	1	3
Craigie Litigant . . .	..	2	1	3
Craigie M'Quaid . . .	1	1	1	3
Everlasting . . .	..	..	3	3
Macgregor . . .	..	..	3	3
Old Times . . .	..	..	3	3
Prince Henry . . .	..	..	3	3
Apukwa . . .	1	1	..	2
Darnley . . .	..	..	2	2
Douglas Castle . . .	1	1	..	2
Mount Royal . . .	2	..	..	2
Prince of Albion . . .	..	1	1	2
Prince Lawrence . . .	..	..	2	2
Rising Tide . . .	1	..	1	2
Time o' Day . . .	..	..	2	2
Baden Powell . . .	1	..	..	1
Baron of Burgie . . .	1	..	..	1
Baronson . . .	1	..	..	1
Benedictino . . .	..	1	..	1
Botha . . .	..	1	..	1
Brunstane Again . . .	..	1	..	1
Craigie Ambition . . .	1	..	..	1
Craigie Beau Ideal . . .	1	..	..	1
Craigie Excellence . . .	1	..	..	1
Dupplin Castle . . .	1	..	..	1
Fyvie Sensation . . .	1	..	..	1
Hiawatha Again . . .	1	..	..	1
Marmion . . .	..	1	..	1
Sir Everard . . .	..	1	..	1
St Albion . . .	1	..	..	1
Woodbank Majestic . . .	1	..	..	1



## SOME IMPRESSIONS OF FARMING IN HOLLAND.

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THE world has been indebted to the Netherlands for many of the greatest steps in the progress of farming. The cultivation of turnips and clover, for instance, was begun there, and was copied by our own and other countries. The technique of draining marshes and lakes, and of reclaiming land from the sea, is mainly due to the Dutch, and the largest of our own fenland reclamation schemes was carried through by a Dutch engineer. Again, the black-and-white dairy cow of Friesland is the only serious competitor, in the world market for pedigree cattle, with our British breeds.

To-day there is still a great deal of interesting farming to be seen in Holland and many useful lessons to be learnt. It is indeed usual to regard Denmark as the shining example of efficient small-scale farming and of agricultural organisation, and it must be admitted that it was Danes and not Dutchmen who first showed what education, co-operation, and a well-conceived system of State aid could do for the small man. But there is now little to choose between the two countries in the matter of the general organisation of the industry, and from every other point of view (as it seems to us) Holland offers more of interest to the British visitor. For one thing, the farming of Denmark practically revolves round the dairy cow and the pig, while that of Holland, though rather highly specialised by districts, presents many interesting contrasts as one moves from one district to another. There are areas of highly intensive arable farming, like Lincolnshire or East Lothian, where potatoes, wheat, sugar-beet, and other ordinary field crops are grown to great perfection. There are other areas of rich and well-managed grassland, carrying an extraordinarily heavy stocking of wealthy, deep-milking cows. Still other districts specialise in glass-house produce, in bulbs, or in out-door vegetables; and everything that one sees bears the stamp of efficiency and speaks of the pride that the Dutch farmer takes in his work and in his land.

The people, too, have much in common with ourselves. They are great believers in freedom of thought and speech, and they, like us, built up their commerce and industry

under the doctrine of free trade. It is only lately that they have felt obliged, like ourselves, to turn to quotas, tariffs, subsidies, and other such measures in order to save their farming and their trade from collapse.

### SOILS AND LAND RECLAMATION.

Most of the good land in Holland, of which there is a great deal, is artificial. "God made the sea, but the Dutchman made the shore." The land that is safely above sea-level,



Fig 3 — *Windmill Pumps for Land Drainage, near Zaandam.*

lying on the eastern side of the country away from the sea, is largely a poor glacial sand that is not suited to intensive farming, though very little is now left waste. About 38 per cent of the whole country would be under water in times of flood and high tides were it not for the constant maintenance of the natural sand-dunes, the artificial dykes and sea-walls, and the vast system of canals and pumping plants. It is in the reclaimed areas, in the main, that the best land and the most intensive farming are to be seen. The level of the water-table in all this area is under complete control, being allowed to vary by no more than an inch or two as between a wet February and a droughty August. Sluices and pumping

plants are generally planned to deal with about a third of an inch of rain in a day, whereas the monthly rainfall varies from under two to just over three inches, giving a total for the year of about twenty-six inches, a figure of the same order as that of our own eastern districts. Drainage rates are necessarily high, running quite commonly to figures of 10 or 12 guilders (17s.-20s. at par) per acre, and in exceptional cases reaching double these sums. But the complete control of the water-level gives a measure of independence of rainfall that makes for heavy and very regular yields both of crops and grass. The 'Waterstaat' or Ministry of Drainage and Waterways is a very important Government Department and is responsible for the upkeep of the main canals and dykes. The control of the local drainage—of the individual 'polders' or basins—is similarly a very important part of local government.

The soils of the reclaimed areas are of various kinds. There are, especially where land has been won from the sea, great stretches of deep stoneless silt, varying from rather light sharp land to fairly heavy soil not unlike that of the Scottish carse. Typically this silt has enough body to grow excellent crops of wheat and yet is not too strong, when carefully and thoroughly worked, to produce really magnificent crops of potatoes. The heavier silt land is largely under permanent grass which is given over almost exclusively to dairy stock.

Over a further part of the low-lying region the basis of glacial sand was originally covered not with river silt or sea mud, but with peat. This 'high-moor' has now been largely reclaimed. The land was first drained by driving main canals through it and by digging smaller tributary canals and ditches, all on a rectangular plan. The depth of the peat layer varied greatly from place to place, but much of it was between six and fifteen feet thick. The peat was cut out and taken by barge to the towns to be sold for fuel or litter. But the contractor was always required, after the peat had been removed, to replace the surface turf—perhaps a foot or eighteen inches thick—on the underlying sand. In many cases the peat barges brought back loads of city refuse to increase the fertility of the new land. Heavy doses of phosphate and potash were next applied, and the final result was a fertile black sandy loam. This grows heavy crops of rather poor quality potatoes, which are used largely for the manufacture of starch. Corn crops also are bulky, and yield more straw than is wanted for home consumption or needed to make dung. The surplus is manufactured into straw-board (coarse cardboard) in factories that are sometimes owned and run by farmers' co-operative societies and sometimes by ordinary business firms.

Some of the other areas that have been reclaimed from

shallow fresh-water lakes or meres have a black fen soil. The largest enterprise of this kind was the drainage of the Haarlemmer Mere, which was completed in 1852 and yielded nearly 49,000 acres of new land. Some of the best of the market garden soils, in the Westland district and elsewhere, have a basis of this black fenland peat overlaid by sand which has blown inland from the sand-dunes that fringe the coast. This 'Geest' soil, when thoroughly drained and well fertilised, is excellent for glass-house work and frame cultivation. Some of the bulb-growing is on this type of land, but hyacinths are mostly cultivated on highly manured dune



Fig 4 — *Mud Flats in Process of Reclamation*

sand, and light silt land is preferred for some other sorts of bulbs.

A very interesting process, which was first worked out in Schleswig, is used for the reclamation of mud-flats along the shore, and is going slowly but steadily forward along the northern part of the mainland coast and also round some of the Friesian Islands. This is really a process of warping, planned to increase the speed of the natural accumulation of the sea mud. A network of fences is erected in the mud, stretching out almost as far as the eye can see or the ordinary tide recedes. The fences are made of strong piles driven deep into the mud, with bundles of brushwood, &c., between. The whole object is to slow down the rate at which the tide runs back and to create lagoons of fairly still water in which

the silt can settle. After the process has been going on for some years the mud is thrown up into 'lands' or 'rigs' so that the ordinary tides may still run up along the furrows, and the furrows are occasionally cleaned out by hand labour, the silt being thrown on to the tops of the ridges between. At this stage Saltwort (*Salicornia*), Sea Aster, and other salt-marsh plants gradually become established. The land is now covered with water only at spring tides, and only needs to be protected from these and to be drained by sluices. The area is now, therefore, enclosed with a sea-wall, and, as the salt gradually disappears, the land is brought under crop and laid out in farms. Recently a sea-grass, *Spartina Townsendii*, which is a natural hybrid first discovered in Southampton Water, has been used further to speed up the silting process. This grass can be established by dibbling offsets into the mud, even in places where there is a considerable run of tide; its strong roots help to fix the shifting mud, and its tall stout leaves act as traps to catch and hold the silt. It conveniently dies out as the salt content of the reclaimed land falls away.

In still other cases large bays and inlets have been shut off by dykes and are drained by means of pumps, the surface remaining well below mean sea-level. The early pumps were, of course, all wind driven, but wind power is gradually being replaced by electricity.

Records of the main reclamations during the past four hundred years are fairly complete, and the figures may be given roughly as follows :—

	Acres
'High Moor' reclaimed by removal of peat . . . . .	160,000
Mud-flats reclaimed by warping . . . . .	55,000
Land reclaimed from sea by dyking . . . . .	555,000
Land reclaimed from fresh-water meres . . . . .	265,000
	<hr/> 1,035,000

Thus, apart from a large area of marsh that has been drained, and broad stretches of sandy heath that have been turned into farms, a full million acres have been added to the cultivated area of Holland by well-directed hard work. The quality of the land is even more impressive than its extent, and, since a great deal of it is cut up into holdings of an acre or less, for intensive market gardening, flower culture, &c., it provides a living for a vast number of people. Even when the land is grass or ordinary arable it may pay a rent of three or four pounds an acre.

However, the greatest of all the Dutch projects, comparing in magnitude with the Panama Canal or the great Nile Dam, is the dyking of the Zuyder Zee and the reclamation, already well begun, of the fresh-water lake into which it has been turned.

The plan was first seriously put forward as early as 1892, and after a great deal of preliminary survey work, operations on the main dam started in 1920. Most of the difficulties had been foreseen and others were met as they arose. Twelve years later, amid great national rejoicing, the dam was closed. As one example of the thoroughness of the planning may be mentioned the fact that the soil experts, with the help of the Navy, carried out a detailed soil survey of the whole area while it was still under the sea, with the object of ensuring, as far as possible, that the best land might be chosen for reclamation and the poorest left to form the large reservoir that is required to receive and control the waters of the Maas and other rivers.

The total area of the Zuyder Zee was 830,000 acres, and the



Fig. 5.—Zuyder Zee Reclamation—The last Gap in the Main Dyke, May 1932.

plan is to drain 562,000 acres, an area considerably larger than that of the three Lothians. The main dam, from the east end of the island of Wieringen to the Friesian coast near Harlingen, is about nineteen miles long. It is about ninety yards wide, rises more than twenty feet above mean sea-level, required for its building about forty million cubic yards of sand, clay, and stones, and cost about £12,000,000. An excellent motor road runs along its whole length, and a railway can be added if and when this seems desirable.

The southern part of the sea is shallow, varying from a matter of a foot to fifteen feet, and the floor is fairly level. Towards the mouth the depth is much less regular, with channels reaching over twenty feet of water and carrying a strong stream at the full run of the tide.

The first and smallest of the four projected 'polders' or

separate enclosures, extending to 48,000 acres, is already drained. In the summer of 1936, when the writers motored over it, many parts were already carrying their third crop of corn, mostly wheat and barley. The water had still been sea-water when this polder was pumped out, so that the soil had taken some time to rid itself of salt. But fortunately the soil is well supplied with lime (from the layers of sea-shells which it contains) and became friable and workable sooner than would otherwise have been the case. The land is first farmed, with the help of tractors and large implements, by a large syndicate of contractors; in the meantime the drainage receives the final touches, the farms are laid out, and the buildings erected. Already in 1936 some sets of buildings

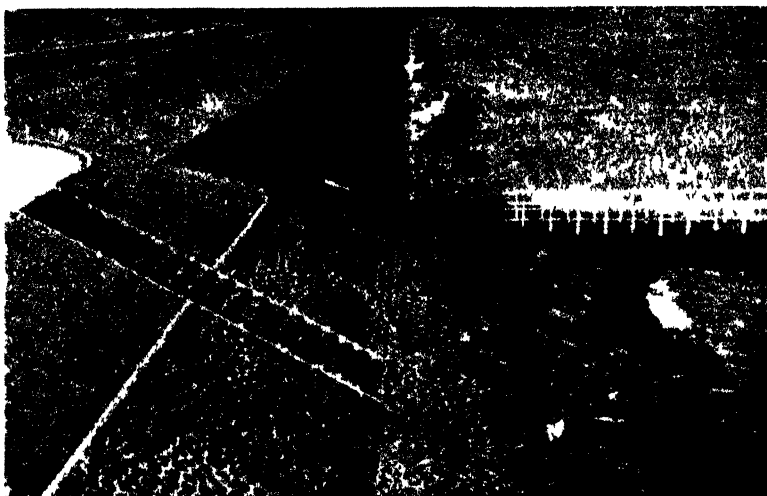


Fig 6 —Zuider Zee Reclamation—A Section of the Main Dyke.

were finished, and many others were in course of erection, the tenants meanwhile making shift in corrugated iron shanties. Poplar trees were already growing up along the roadsides, the apple trees were well rooted in the new farm orchards, and cows and horses were already grazing the new paddocks of rye-grass and clover. The corn crops were bulky, and, even making allowance for a rather high proportion of straw, looked like running to five quarters of wheat and barley and perhaps eight or ten of oats. Here and there was a hollow in the old sea-floor that was causing drainage trouble, and here and there were patches of a black fenny or peaty soil that was taking time to settle down and dry out. But the bulk of the soil was the same deep rich silt that was seen on previously reclaimed land elsewhere.

As an indication of the scale of this, the smallest of the four polders, it may be mentioned that the main pumping plant, at Medemblik, has a capacity of about five tons of



Fig 7 —*Zuyder Zee Reclamation—Digging a Main Ditch in the new Land*



Fig 8 —*Zuyder Zee Reclamation—The first Stooks standing between the Drainage Trenches*

water per second. Another interesting feature of the polder is a large artificial flat-topped hill, well above high-water mark, which has been built as a refuge for the population in



case of a future inundation. The new farms are being let to the settlers on long leases, with a rise in rental after the first few years.

The enclosure of the second (north-east) polder (which will be nearly three times the size of the first) is going forward, but some years must pass before the dyke is finished, and nearly a generation will elapse before the whole scheme is completed. The financial result of the venture will depend on the rate of interest which, in the long-run, the Government has to pay on its loans. The total cost, including farm buildings, roads, &c., may probably exceed forty million pounds, or over seventy pounds an acre, but there are other



Fig 9 —*Zuyder Zee Reclamation—Farm Buildings for a new Seventy acre Grassland Holding.*

benefits to be placed on the credit side apart from the creation of a new province. The scheme, for instance, has provided useful work for great numbers of people who would otherwise have been unemployed. Probably in the end there will be no great balance of financial gain or loss, but Holland will be very proud of her achievement even if it fails to pay its full five per cent.

#### RURAL ECONOMY AND ORGANISATION.

Nearly half the holdings in Holland are from  $2\frac{1}{2}$  to  $12\frac{1}{2}$  acres in extent and roughly eighty-five per cent are less than 125 acres. If, however, the great mass of highly intensive

market-garden and glasshouse holdings be left out of account (these are commonest in the Province of South Holland), the country does not give the impression of very small units of production. In the north particularly, in the provinces of Friesland and Groningen, the farms run fairly large; a typical holding might be sixty or seventy acres, might employ two hired men besides the farmer and his family, and might, if farmed by a tenant, be rented at two hundred pounds a year. Even on the biggest holdings the farming is often very intensive, employing as many as six or eight men per hundred acres.

About half the land is farmer-owned, the actual figures being that 56 per cent of farmers are owner-occupiers and that they own 51 per cent of the acreage. Ordinary cash tenancy is thus quite common, though really large landed estates are much rarer than in Britain. About half the farms again are family farms in the strict sense, employing no paid labour except perhaps a casual worker for a few weeks in the busiest seasons. About a quarter of a million farmers and market gardeners, and about 400,000 wage-earners, find occupation on the six million acres of cultivated land, and nearly a third of the total population is dependent on farming and horticulture.

It is impossible to give a real estimate of the earnings of the Dutch farm-worker without going into calculations about the cost of living. But at the time of the writers' visit the prevailing wage-rate, at the prevailing rate of exchange, was equivalent to 40s.-45s. per week. With the recent devaluation of the guilder the wage represents only 32s.-36s. Even so, considering that Holland is a large exporter of farm produce, it must be admitted that the farmer contrives to do well by his men. Hours of work, it is true, are rather longer than they are on British farms, but the farm-workers and their families are comfortably housed, are well clad, and look well fed. The absence of tramps on the roads and of completely down-and-out individuals in the towns and villages, and the scarcity of anything that could be called slums, either in the town or the country, are very striking. Allowances in kind are not large, though in some districts grazing is allowed for one or two ewes which provide the worker with his summer supply of milk.

Farmers' co-operative enterprise is very highly developed, but the attitude of the Dutch farmer to co-operation is somehow different from that of the Dane. With the latter, co-operation is rather a faith. In Holland it is not made a fetish, but is quietly accepted and efficiently run wherever, on balance, it is thought to be preferable to private trade. In many cases a new industry has been allowed to develop as an ordinary capitalist enterprise, and later, if expansion

seemed necessary or competition seemed desirable, co-operative societies have set themselves up. This obviates any sort of monopolistic control, either by the traders or manufacturers, or by the farmers themselves. But producers' co-operative societies are playing a steadily increasing part in the marketing and processing of farm produce, and there has been, especially during the present century, a rapid and steady rise both in the number of societies and in their membership. Co-operation developed first in connection with the purchase of farm requirements (fertilisers, feeding-stuffs, and seeds), and turned later to auction sale, the processing of milk, potatoes, sugar-beet, straw, &c., and to milk recording and live-stock improvement (bull and stallion societies). Finally it has entered the fields of insurance and banking, and is even applied to education, research, and field experimental work.

All this does not mean that the State has failed to play its part in agricultural development. Agricultural education has been very carefully and efficiently organised, and there is an extremely good system of State inspection for seeds and for all the main export commodities such as butter, cheese, seed potatoes, and market-garden produce.

The Central Agricultural College and National Experimental Station at Wageningen provides full courses in home and tropical agriculture, home and tropical forestry, and in horticulture, and produces the fully qualified men for the educational and advisory services, both in the home country and in the colonies. There is an Agricultural Institute at Groningen, a Dairy School at Bolsward, and a Cheese-making Institute at Doorn. For the farmers' sons who cannot afford either the time or the money for long whole-time courses there are about thirty winter schools for agriculture and horticulture, some of which are purely State endowed, while others are financed by denominational or other bodies. The vocational course in these schools usually covers two winters. Even in the elementary (or what we would call, perhaps, central schools) there are definite vocational courses. The schoolmasters in charge of this work have all taken a special course of training, which is provided on Saturdays and lasts for three years. When a man has taken such a course and has passed an examination he becomes entitled to extra pay for his special agricultural work. Some eight hundred schoolmasters have so qualified, so that the great majority of the 1079 Dutch parishes have a master trained to teach the special classes. There is thus a complete educational system which conveys a certain amount of knowledge and provides a sound rural outlook for the great mass of young people who are looking forward to a life on the land.

A good example of Government control of an export com-

modity is seen in the case of cheese. Very large quantities of Gouda and Edam cheese are manufactured, the total output in some years having exceeded two and a half million hundred-weight. Gouda has ordinarily been sold as a whole-milk cheese, but there was some evidence of the use of partially skimmed milk. Edam, on the other hand, was quite often made from a mixture of whole and separated milk, and there was an export demand for this lower grade of material. The good name of the product was, however, being lost because there was no guarantee of quality.

In 1918, when the Government took action in the matter, it was decided to impose a general Government inspection of

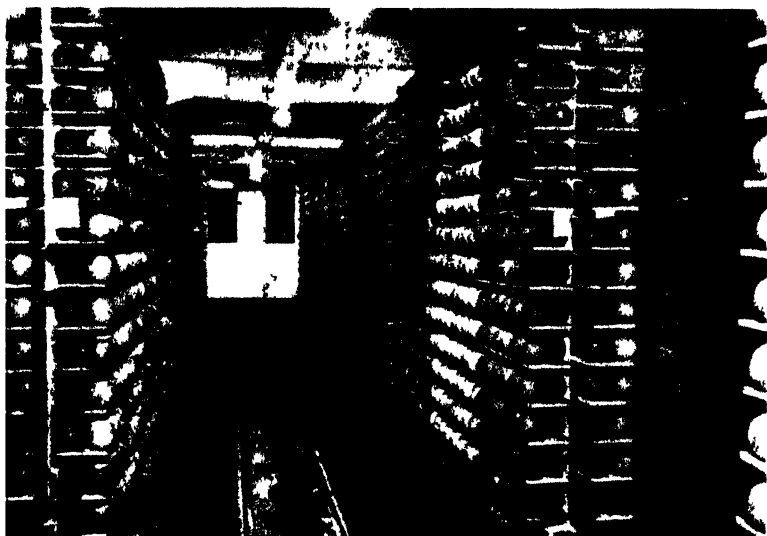


Fig. 10.—*Edam Cheeses in Store.*

all cheese. That containing less than 20 per cent of butter-fat in the dry matter was refused any official mark and was thus automatically prevented from being exported, for export certificates are refused to ungraded lots. Whole-milk cheese, to become entitled to its Government mark, must contain the whole of the butter-fat of the milk, and must have a minimum of 46 per cent of butter-fat in the dry matter. Other grades of 'lean' cheese must be guaranteed by their manufacturers to contain minima of 20, 30, or 40 per cent of fat respectively in the dry substance. The grade of such cheese is stamped upon it, along with the Dutch National Mark. Ninety-five per cent of the total make of cheese is marked, and, until the restrictions of recent years, nearly eighty per cent of the total make was exported.

Another example of Government organisation is the very complete system of inspection of seeds and seed potatoes. The Dutch export trade in seed potatoes is of comparatively recent date, for at the beginning of the present century the Dutch farmer was growing many British and German varieties and was taking no particular interest in the maintenance of pure and clean stocks. Now the country has a considerable export trade to Belgium, France, and Germany, and the quality of the potato stocks seen in the seed-growing district of North Friesland would have borne comparison with that of the best in Scotland. An inspection service of a kind has



*Fig. 11 —A Crop of Seed Potatoes and their Grower, North Friesland.*

been in operation for many years, but it was only in 1932 that the present system was introduced. It is under the control of the Netherlands Inspection Service, with headquarters at Wageningen. A grower who proposes to sell seed potatoes must apply for the inspection of his growing crop. The inspector may classify a particular crop as A (excellent), B (good), or C (fair), or, of course, may refuse to award classification of all. The classes are based, as in this country, on the purity of the stock and its freedom from virus disease. The standard for Class A seems to be quite as high as that required for a Stock Seed Certificate under the Scottish Department.

A second inspection, of the potatoes in bulk, must be made before the actual certificates are issued, attention being given to the amount of blight or other disease and the general condition of the sample. The produce is placed in sealed bags and each sack contains a certificate with the name of the variety, the class awarded to the stock, the registered number of the grower, the dressing (sizes of riddles), and the general type of soil (sand, heavy land, or fen) on which the crop has been grown. Any complaint by the purchaser can therefore be investigated, and any fault brought home to the grower. The fact is widely advertised that potatoes other than those bearing the official seal should not be used for seed purposes.

A similar system of field inspection is used in the case of seed crops of cereals, &c.

#### ARABLE FARMING.

The main arable district visited was the coastal belt of the northern provinces of Friesland and Groningen, and the impression left upon the writers was that nowhere (not even in East Lothian or in the best farmed parts of Lincolnshire) would it have been possible to see farming better done. Moreover, the standard was almost uniformly and universally good. One could motor for miles without seeing even a middling crop of wheat or potatoes, and a very occasional gappy field of mangels or sugar-beet was the only sight that broke the monotony of excellence. The cleanness of the land, which is farmed literally to the edge of the ditches, was remarkable, and was very impressive after a run through the rather weedy England of 1936. The absence of hedges and banks no doubt has something to do with the freedom from weeds, and, of course, good land with frequent crops of tall-shawed potatoes will, up to a point, keep itself clean. But in most of the fields weeds were almost as scarce as stones. One guessed the average wheat crop as likely to run to nearly seven quarters an acre, and the ordinary potato crop as likely (barring a bad attack of disease) to yield eleven or twelve tons; and (after a good deal of laborious arithmetic in converting hectolitres per hectare into quarters or tons an acre) one generally found that the farmer's guess was much the same as one's own.

The chief crops of this area are wheat (very often Wilhelmina or Juliana), which enjoys a Government guaranteed average price and therefore gives a safe return; a long-strawed and heavy yielding six-rowed winter barley; oats, very often Svalöf sorts like Victory and Golden Rain; potatoes (nearly all native Dutch varieties); sugar-beet, mangolds,

and flax. The flax was the white-flowered Dutch variety, with a very long and clean stem.

Among the more out-of-the-ordinary things were seed crops of sugar-beet and other roots, mustard, poppies, canary seed, and caraway seed. The last commodity is in large demand in Holland, appearing not only in one's cakes for tea, and on top of one's breakfast-roll, but also in a common variety of cheese. It also imparts flavour to one of the favourite strong liquors. About ten thousand acres of the crop are usually recorded in the statistics.

Little live-stock, except pigs, is kept, during summer, in this district—few cattle and scarcely any sheep. In winter some bullocks and barren cows are fattened, and some heifers are wintered. But it seemed that a good deal of straw was sold to the straw-board factories; at any rate the available courts and yards could not have held enough cattle to turn all the straw into dung. On the other hand, the quantities of artificials bought run very high, as is the case on similar land and under the same general system of farming in the silt-land districts of Lincolnshire. In neither district would it be thought anything out of the ordinary to apply fifteen hundredweight of compound artificial to an acre of potatoes.

#### GRASSLAND AND DAIRY FARMING.

There are, of course, numbers of farms in Holland that are partly arable and partly grass; but, just as there are areas where a grass field is an exception, so there are other wide stretches of country where the green landscape is hardly broken by a field of corn, and where the plough has not been used in great numbers of years. A first inspection of the swards of these old grass fields does not give the impression of extraordinary quality. The growth seems a little coarse, and there is a fair sprinkling of weeds of one kind and another. There is indeed a great preponderance of rye-grass in most of the fields and a good blend of white clover, but one could show more attractive-looking turf in Leicestershire or Ayrshire. It is only when one raises one's eyes to the landscape that one is made to realise what the grass can do. The numbers of black-and-white cattle seem to be more than any land could possibly carry, apart altogether from the great crops of hay in the barns. It is true that the hedgeless and flat landscape makes the most of the numbers of stock, but in fact the cattle population is very dense. Seventy acres, forty cows, and a full complement of heifers is not an exaggerated picture of the typical grass holding in the better districts.

The soil and climate and the system of management are indeed all calculated to produce a great growth of grass.

The land has usually enough body to stand some drought, while it is not so full of clay as to crack in dry weather. There is a permanent water-table, kept at a fixed level, not too far below the surface. The summer is neither too hot nor too cold for steady growth, and the rainfall is well distributed. Moreover, the pastures have a complete rest in the winter, for then the land is often too wet to carry heavy cattle, and the stock is kept continually indoors. It is true that very little cake or concentrate is fed to any of the stock in summer, but a good deal of dung is made in winter and is spread on the land that is wanted for hay. This, with an occasional dose of phosphate, is all the manuring usually necessary, though one farmer spoke of spring top-dressing with ammonia. The fields (which are bounded only by ditches) are generally small,



Fig. 12.—*Friesian Cows at Pasture, North Holland.*

and the milch cows have a frequent change of keep, the dry stock following on to clear up. If the grass gets ahead of the stock it is cut and made into stack silage. There is very little tethering of cattle on grass (which is very common in Denmark), but the grazing management seems generally to be very good. The fields, hedgeless and without vestige of trees, are, as a result, devoid of any shade, but, in spite of summers rather hotter than our own, the absence of shade was never in the slightest regretted.

Milk production is almost the be-all and end-all of Dutch grassland farming. The statistics give well over a million dairy cows against no more than 60,000 beef animals. There are actually four breeds of cattle. In Friesland itself and many parts of the adjoining provinces it is a rare thing to see a beast showing anything but the characteristic build and markings of the pure Friesian. In the provinces of North and



South Holland the great bulk of the cattle are of the same breed and the same general type, although they are not so uniformly good. Only in the non-breeding dairies near the large towns does one see a mixture of cattle, a good many of the red-and-white breed from the eastern provinces, and a few of the white-faced, black-bodied Groningen cattle from the north. The Groningen used to be described as a dual-purpose cow, but has lately been bred more on dairy lines. It has hardly the symmetry or breed type of the Friesian, and seems to be losing ground to the latter.

The Friesian breed has spread to most districts of Holland, and Friesians from every province are entered in the appropriate section of the General Netherlands Herd-book. But



Fig 13 —A Friesian Family—Property of Messrs Wassenaar Bros, Jilsum, Friesland Average Yield, 9343 lb Milk at 4 47% Butter fat

the breeders of its native province still regard their cattle as a kind of super-élite strain, and run their own society, with its headquarters in the provincial capital, Leeuwarden. The office of the society is a place of interest, the walls of the main reception-room being completely decorated in Dutch tiles. Many of these bear portraits of famous cattle, and there are several sets of pictorial pedigrees, a famous animal appearing below its parents and grandparents. The visitor, on his departure, may be given a tile bearing an imaginary portrait of the perfect cow.

It is rather a prevalent view that the Friesian breed has been produced on the sole principle that the best cow is the one which fills the biggest pail, and with little attention either to the quality of the milk or the shape of the animal. However breeding may have been carried out in past times, this

is not the idea, in the minds of breeders to-day. The view seems rather to be that yields are already about high enough, and that the main effort should be concentrated on a higher butter-fat percentage and on the production of a cow with the substance and constitution to live and milk to a good old age. Efforts to raise the butter-fat have been going on since the early days of milk recording, and the expansion of the recording movement, and the success of its work, is well illustrated by the statistics of one of the earliest societies in Friesland.

				No. of Cows recorded.	Average yield per Cow.	Average Butter Fat.
					lb.	
1895	.	.	.	49	10,102	2.99
1910	.	.	.	8,542	10,466	3.18
1925	.	.	.	15,012	10,812	3.54

On the question of conformation the Dutch breeder has very definite views, a point that we are apt to miss because the ideal which he has in mind is something a little different from our own mental picture of the perfect dairy cow. The Dutchman's ideal is a big and deep-bodied cow, with very wide, square, and level hindquarters, and carrying a moderate amount of flesh. The ideal bag is large and square, but not so tightly carried nor running so far forward as the ideal vessel that was originally set by the Ayrshire breeders, and has more lately been adopted by fanciers of other British breeds. The Dutchman's idea of a perfect head still looks to our eyes rather long and a trifle 'plain,' but the old-fashioned 'fiddle-faced' cow is not so common as she used to be. The main point is that the Dutch breeder gives a great deal of attention to shapes and knows well enough what he wants. The American breeders are quite freely criticised in Holland for having concentrated too much effort on the production of 'stunt' records and for having neglected constitution and breed type.

It goes without saying that the Friesian cow could not have achieved her world-wide reputation without a vast and long-continued effort on the part of her breeders. One feature of their herd-book system is worthy of special mention. The records kept not only include milk yields, butter-fat records, and pedigrees, but a sketch portrait of the markings of every animal (so that mistakes of identity may be avoided), and also a score-card of the 'points' of the animal as adjudged by the Society's inspector. Thus one can turn up not only the milk record and the pedigree of any cow, but can read that she was a big cow with a plain head and a drooping

hindquarter. One can also tell from the total score whether she was, from the point of view of conformation, ninety per cent perfect or only seventy-five. Making all allowance for the fact that this score represents only the personal impression of a single judge, it has a very definite value as a record for future reference.

Herd management is fairly simple, and it would probably be true to say that the Dutch dairyman thinks more about breeding and grassland management, and less about the science of rationing, than his opposite number in this country. One heard surprisingly little about balanced concentrates fed at three and a half pounds to the gallon. Feeding seems to be more of an art than a strict science, and, since the owner lives very much among his cattle, he may probably know better than the book how to feed them. On many farms the cows get nothing but hay, compound cake, and water in winter, and nothing but grass in summer, with perhaps a very little cake towards the end of the grass season. Where there is arable land, mangels are quite commonly included in the ration, but nobody seems to regard roots as necessary.

In summer the cows are not brought indoors for milking. Small herds are milked in a corner of the field while the pony stands by in the milk-cart. In larger herds the cows are tied up to a strong rail and milked either by hand or (less commonly) by a portable milking machine. Occasionally there is an outdoor concrete standing.

The cattle come indoors in October and remain in their byres till perhaps the beginning of May. The byres are obviously designed for cleanliness, with good floors and steel or concrete divisions. One curious feature is the enormously deep and wide manure channel, often with fully two feet of sheer drop at the cows' heels, and so wide that a bridge has to be laid across it to get a cow into or out of her stall, or at calving-time. In spring, when the byre is emptied, it is cleaned to an almost incredible degree of cleanliness, even the metal-work being kept burnished. The Dutch farmer regards his cowshed almost as a room of his house, and it is, in fact, usually under the same roof and approached through the kitchen and dairy. Many of the older byres would hardly come up to our standards of light, ventilation, and cubic space, but the belief seems to be that cleanliness is the thing that really matters.

The general impression left by the grass districts is the same as that gained in the arable areas—an impression of a very high level of efficiency and of infinite care and strict method in everything that is done. Nobody, at least, can charge the Dutchman with being an untidy farmer. He is helped in his constant efforts to keep things ship-shape by the design of his buildings, which is quite unlike any of our

common forms of lay-out. The farmer and his family, his live-stock and his implements, his crop produce and his feeding-stuffs are all housed under one great roof. The typical farmstead, which is shown in the illustration on page 54, is a large oblong building; the farmhouse occupies one end; the cowshed and the standings for young cattle are ranged along one of the sides, and the stable and piggery along the other; the main part of the interior, which is entered through large doors at the back, is divided according to convenience to accommodate hay, grain, and machinery. Sometimes a Dutch barn may stand near-by, but more commonly the only independent building is a covered



FIG 14 — *Farmhouse in North Holland.*

dung-stead. Thus there are no unsightly half-dismantled stacks, no trails of scattered straw, and very little mud. The buildings, for the most part, are kept in excellent repair, and many of them look as if they had been specially painted in preparation for one's reception. The contrast between this ordered neatness and the haphazard arrangement of buildings so common in the South of England, with muddy, wet yards, rotting thatch, unsightly corrugated iron, &c., is very striking.

The farmhouse floors are mostly tiled, giving the rooms a rather chilly and comfortless appearance; but carpets and wooden boards are dirty things, and here again other considerations must give way to spotless cleanliness.

## OTHER LIVE-STOCK.

The ordinary live-stock market in Holland, to anyone accustomed to a large modern Scottish auction-mart, is curiously primitive. The animals for sale are tied up or penned in large market-places, which are only partly covered over. All the selling is by private bargain, and no deal goes through without prolonged haggling. Most of the sellers have very small consignments—a down-calving cow or a fat heifer, a couple of veal calves or a litter of pigs. Dealers seem to be nearly as numerous as farmers. There is a considerable trade in milch cows between the breeding districts, where most of the milk is manufactured, and the whole-milk dairies near the big towns. But most of these cows are old. The beef cattle are, of course, both few and bad, but there are large supplies of well-fed vealers. Bacon pigs, whether the lean light-weight class for the English market or the heavy fat type that is produced for Germany, generally go direct from the farm to the factory, so that the pig section of the market is smaller than might be expected.

At one time (before 1926) there was a large export of small pork carcasses from Holland to London, but this trade was stopped, as will be remembered, on account of the infection of some of the imported carcasses with foot-and-mouth disease. The trouble, as Dutch farmers are all free to recall, was with Belgian pigs, and it was rather hard that the Dutch, who had been exercising great care, should have suffered for their neighbours' fault. Now, so far as the English market is concerned, the Dutch pig-breeder has to aim at bacon instead of pork, and has had to change his type of pig. This he has done by grading up his stock with Danish Landrace or English Large White boars.

Sheep are very few in the districts visited; it is exceptional to see a flock of as many as a dozen ewes. Apart from a few of the old native milking type, the ewes are mostly of the Texel breed, or crosses of these with English longwools such as the Lincoln. These ewes are often crossed with English Down rams, chiefly Oxfords and Hampshires.

Large-scale poultry breeding is rarely seen, but nearly every farmer's wife keeps her flock of fifty up to two hundred birds, chiefly Leghorns and Barnevelders.

The authors did not visit Zeeland, which is the main centre of heavy horse breeding. The horses in the northern provinces are mixed, with half-bred and light-legged types predominating.

## MARKET GARDENING.

Nearly every branch of horticulture is highly developed in one district or another. The traveller who lands at the Hook

of Holland and travels north to The Hague passes through what can be better described as a town of glass-houses than a stretch of country. Large vineries and peach-houses are common, and the export of grapes is on a large scale. Other houses are devoted mainly to tomatoes, but winter catch-crops of other things are generally taken as well as the main summer crop. The illustration overleaf shows such a catch-crop of early cauliflower with the main crop of tomatoes interplanted and already well advanced. Cucumbers, melons, early lettuce, &c., in frames or 'Dutch Lights,' are other important crops. In the spaces of open ground there is a



Fig. 15.—*General View from the Air, Westland.*

(Copyright K.L.M. Dutch Air Lines.)

great variety of salad crops and other small vegetables. The whole countryside is a network of small and larger canals, and most of the produce goes to market by barge.

The district round Boskoop, which has a black fen soil, concentrates very much on nursery work, producing azaleas, laurels, and a great variety of other flowering shrubs, as well as decorative conifers, fruit bushes, and rose trees. Some of the holdings are minute, running to no more than a fraction of an acre.

Much farther north, near Alkmaar, is an area that specialises on the plainer outdoor vegetables, mixed up to some extent with agricultural crops. Enormous quantities of cabbage are grown, specially for the German market, and some of the larger



Fig. 16 — *Interior of Glasshouse, Westland. Tomatoes intercropped with Cauliflower.*  
(Copyright De Tuindery.)



Fig. 17.—*A Range of Cucumber Frames in Westland.*  
(Copyright De Tuindery.)

growers have great sheds fitted up with shelving in which the cabbage is stored for the spring trade. Other districts specialise in early potatoes, cut flowers, herbaceous garden plants, &c.

The chief bulb-growing area is, of course, near Haarlem. As one travels north there are high sand-dunes on the left and flat polder-land away to the right. The holdings are mostly very small, so that as one runs along the main road the houses of the growers and the cottages of their workers make, for miles at a stretch, an almost continuous village street. Most of the surface soil is pure blowing sand, but so

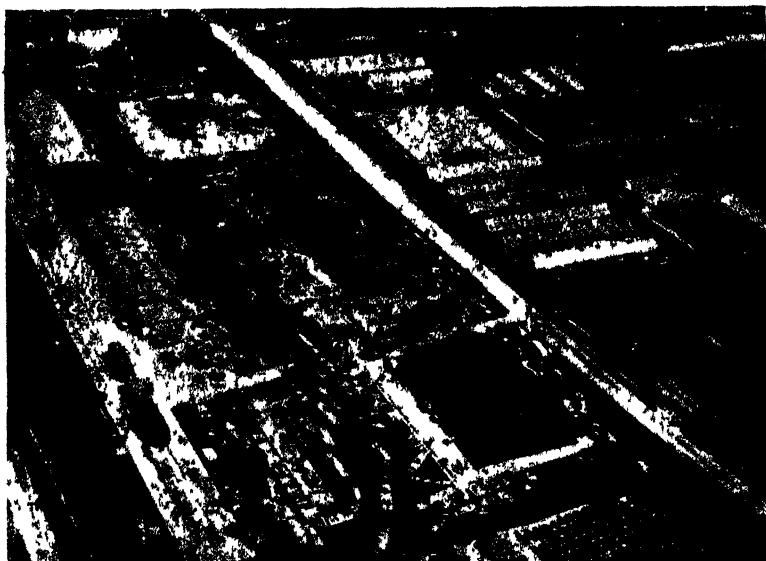


Fig. 18 — *Auction Mart at Poeldyk (Westland), from the Air.*  
(Copyright K L.M. Dutch Air Lines)

heavily manured that it is a dark-grey or blackish colour. The land is divided into strips by tall hedges, to provide shelter, and these are supplemented by strips of rye, oats, or other tall plants.

### A DUTCH AUCTION.

A visit to one of the larger vegetable markets is a very interesting experience. Many of these are situated on canals, and the buyers sit on a kind of grandstand whence they can look down on each barge-load of produce as it comes forward.



Most of these markets are owned and run by co-operative societies.

The actual selling is almost completely mechanised. A large dial, with a series of prices marked round its margin, occupies a prominent place in full view of the customers, each of whom has a press-button on the desk before him. A barge-load of vegetables comes forward, and the auctioneer announces the number of crates of a particular sort that is for sale. A specimen crate is held up for the inspection of the buyers. The auctioneer then starts the pointer moving round the dial, beginning at a price well above what the



Fig. 19.—A Barge-load of Grapes in the Auction at Poeldyk, Westland.

(Copyright De Tunderdy)

goods are expected to realise. Presently a buyer presses his button, one result of which is that he stops the clock, and the other that the number of the desk where he is sitting is lit up on the dial. The clerk books the quantity sold, the price, and the buyer's number, and the auctioneer proceeds to the next lot. Barges follow each other past the sale ring in quick succession, and the produce is presently transferred to lorries or steamers. Very large quantities of vegetables pass through at a rapid rate, and there is a strange absence of noise and a complete lack of confusion. A bird's-eye view of one such market and an interior view of another are illustrated on pages 69 and 70 (Figs. 18 and 19).

## THE AGRICULTURAL CRISIS.

In view of all the factors that have combined in recent years to interfere with international trade, it is not surprising to be told that the Dutch farmer, who grows so much for export, has been working under very great difficulties.

For many years the world prices of butter and cheese have been notoriously low and these are among the chief of Holland's exports. The situation with regard to export prices went from bad to worse when this country went off the gold standard and Holland decided to stay on gold; this meant that internal prices and costs remained at a high level, while there was a rapid fall in export values, amounting to over forty per cent. Our horticultural duties were a bad business for the glass-house industry, because a large proportion of the produce has always come to Britain, and has nowhere else to go. Bulbs, rose trees, and such things are definitely luxury articles, and the severe business slump in the United States and elsewhere caused a very serious decline in demand. But by far the worst disaster has been the loss, for the present at least, of a very large part of the German market for Dutch food products. The Dutch farmers indeed did better during the war than those of most countries, and reached the post-war period in a very strong position. But few people can have suffered more severely since. Added to the agricultural depression there has been very severe depression and much unemployment in shipping, which is the next largest industry.

The Government of the country has done a great deal, and the literature of the Agricultural Crisis legislation makes a pile two feet high. It must suffice to mention briefly a few of the measures of relief.

Since Holland was an importer of wheat and other grain, and could not sell the quantity of vegetables, &c., that she had been accustomed to produce, one obvious step was to encourage wheat-growing and replace by wheat some of the surplus vegetable acreage. This was, indeed, a reversal of the whole trend of recent changes, and a backward step in that it meant turning garden land back to plain farming. But this had to be faced. The Government guaranteed a price for average quality home-grown wheat and enacted that the miller must buy, at this price, a certain quota of home wheat. The present basic price (9.25 florins per hectolitre) is, at the present rate of exchange, equivalent to about forty-six shillings per quarter.

The problem of low export prices for butter and cheese has been met, in part, by making the home consumer pay a good deal more than the buyer overseas; but the most heroic of

all the measures was the slaughter of 175,000 cows as a way of stopping the flood of surplus milk. The farmers were encouraged by a subsidy to sell all the poorest of their cattle, and particularly to get rid of their reactors, the meat being processed and sold at a very low price to the unemployed. This measure seems to have failed in its immediate object of reducing the milk output, but at least there is a healthier national herd to show for the money spent.

Pig production, again, has had to be restricted, and the Government has spent money in supporting the market, reimbursing itself by means of an excise duty on home-consumed butcher meat. As regards bulbs, it has been necessary to allot each grower a basic acreage, to prohibit him from growing more, and to control both export and internal prices; and so on. There is in Holland, as here, no general or uniform plan for all commodities; it is a case of trying one thing here and another there.

The Dutch regard all these measures as necessary evils, and many seem still to hope that they are no more than temporary expedients. The townspeople seem to realise that it would be a short-sighted policy to allow the farmer to be ruined, and they seem very willing to bear a share of his burdens. Trade and employment were on the up-grade in 1936, but few people in Holland look for any real or permanent cure for her troubles except in more friendly international relationships and freer international trade.

The writers met with nothing but the greatest kindness during the course of their tour. They wish to acknowledge with special gratitude the help received from Mr B. Gerritzen, Agricultural Adviser to the Netherlands Legation in London; of Mr Wassernaar of Jelsum, Friesland, a noted breeder of Friesian cattle; of Mr Hoogland of St Jacobi, Friesland, who is portrayed among his potatoes in one of the illustrations; and of the officials of the Herd-Book Societies at the Hague and Leeuwarden.

## THE AYRSHIRE BREED.

### PAST—PRESENT—FUTURE.

By A. D. BUCHANAN SMITH, M.A., B Sc, Institute of Animal Genetics, University of Edinburgh.

THE true origins of our breeds of domesticated live stock will always remain a matter of speculation. Of the period before the establishment of Herd Books it is wellnigh impossible to obtain precise information. Even if such were available it requires to be co-ordinated with the methods adopted by the early breeders, and inter-related with those animals from which descend the principal blood lines of the breed. As a gauge for the improvement that has taken place, knowledge of the foundation type is essential, but the true interest lies in the manner in which the master craftsmen of the breed shaped and moulded it throughout successive generations. We desire to know which of the foundation types the early breeders concentrated upon; what were the good qualities of other strains that they introduced, and how they were blended; what new characters of value to the breed arose, apparently spontaneously, and how these also were incorporated.

Coming to the Herd Book period, we must remember that these books are not infallible. There is error due to natural causes, and there is deliberate misrepresentation; this last is not so frequent as it was in the early days, but the historian of a breed must be on guard and refrain from dogmatism.

How many animals registered in the Herd Books have descendants alive to-day? It is probably no exaggeration to say that less than 5 per cent of the early animals are so represented. Thus, it must be remembered that it is exceedingly difficult to measure the degree of selection exercised by the principal breeders, and so to assess their influence on the breed as we know it to-day.

Since its inception, the Highland and Agricultural Society has taken a great interest in the breed of dairy cattle of the South-West of Scotland. The greater part of our knowledge of the history of the breed is derived from contributors to the 'Transactions.' These have been admirably summarised in a painstaking and thoroughly critical article contributed by

the late Dr Douglas of Auchlochan to Volume XXXI., published in 1919. The conclusions then reached have stood the test of subsequent research. By way of introduction, it is proposed to summarise this article, to which the reader is referred for further information. Thereafter this paper will deal with the development of the breed in recent years, and particularly with its phenomenal expansion overseas.

To the South-West of Scotland goes the credit of creating two great breeds of cattle, the horned Ayrshire and the polled Galloway. The polled cattle possess an ancient lineage, and their proximity to the milking cattle demands scrutiny of the possibility of an intermingling of blood, if not of a common origin. It is not enough that, at the present time, the two breeds are widely different, since it must be remembered that a skilled geneticist working with the same foundation stock would have no difficulty in producing, in twenty generations, at least two widely divergent types.

Dr Douglas deals in detail with this point, and comes to a conclusion with which it is not possible to disagree, that not only are the two breeds distinct in their origins, but there has been little mingling of their blood. There is no evidence that polled cattle were ever kept primarily for dairy purposes in the South-West of Scotland. That the polled condition was desirable is seen from the observations of the poet, Robert Burns, quoted by Colonel Fullarton. Furthermore, we must remember that, until the advent of railways, there was little interchange of stock, since the South-West is not a flat plain, but intersected by hills and marshy places. Such interchange as took place in Scotland at that period usually occurred on the drove-roads along which cattle were sent for the English market. These roads did not traverse Ayrshire. Railways, when they came, appear to have had little effect in this direction for many years, due probably to the conservatism of the agricultural community.

All responsible authorities are now agreed that the early cattle of Scotland are of the type known as the Celtic Short-horn, a small animal of which the majority were black. Till recently these could be found in very nearly their pristine condition in Shetland, the Western Isles, Island of Arran, the West of Ireland, and in Norway, where the type is now represented by the Telemark breed.

The next point deals with the question of how much the early Ayrshire owed to stock imported into the district. From the earliest times Dutch cattle had been imported into England, and it is not stretching facts too far to deduce that the early Shorthorn owed a good deal to this blood. Furthermore, the reputation of these Dutch cattle appears to have depended principally on their milking capacity.

In 1769 John Orr, Esq., brought to Grougar, near Kilmarnock, some cows, probably of the Dutch type; these were good cows, for "one of them cost £6, which was more than twice the price of the best cow then in that quarter. Their progeny greatly multiplied in the strath of the Water of Irvine." About the same period John Dunlop of Dunlop brought into Cunningham some cows of a large size from a distance. At a like period the Earl of Marchmont had been improving his cattle at Berwick with stock from the Bishop of Durham, and his factor, Bruce Campbell, carried some to Sornbeg in Kyle; Mr Hamilton of Sandrum used a bull of this stock with effect in the district about Cessnock.

There can be little doubt that it was through these im-

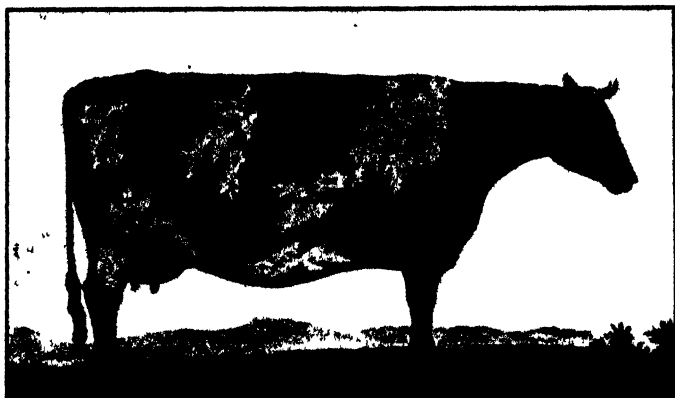


Fig. 20.—*Ayrshire Cow*.  
Portrait published by Aiton, 1811.

ported cattle that the colour of the dairy cow stock of South-West Scotland changed, as Aiton records, from being black, in the middle of the eighteenth century, to brown, or brown and white, by the early years of the nineteenth. Dr Douglas reaches the conclusion that from these importations the Ayrshire derived much of its milking capacity, as well as colour.

Infusion of the blood of other breeds and types is also reported. Speir of Newton mentions the suggestion that the Ayrshire may have originated from animals saved from a ship of the Spanish Armada wrecked at Portincross on the West Kilbride coast in 1588. Descriptions of the cattle of the locality at a later date do not support the hypothesis, and in default of definite record to the contrary there appears

little justification for the suggestion. A ship, probably Spanish, certainly did founder there, and the suggestion is probably a case of *post hoc* rather than *propter hoc*. The same applies to the story of the Battle of Largs (A.D. 1263).

Another suggestion, dismissed by Dr Douglas as "wholly fanciful," concerns the importation of Channel Island cattle. Farrall, in his prize essay in the 'Transactions' of the Highland and Agricultural Society for 1876, supports the idea that Alderneys were imported into the Dunlop district, possibly by Mr John Dunlop, about the year 1800.

Two Governors of Jersey, at the close of the eighteenth

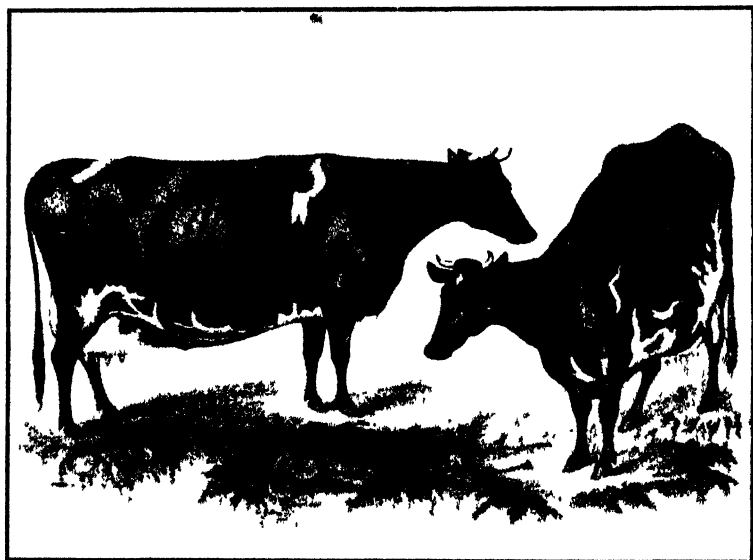


Fig. 21.—*Ayrshire Cows.*

Portrait by Howe, 1828.

century, Field-Marshal Conway and Lieut.-General Andrew Gordon, are both supposed to have shipped some of the best cattle to England and Scotland. Farrall confirms this supposition by a resemblance in the horns, colour, and texture of the hide between the two breeds. However, Aiton, an Ayrshire farmer who wrote, about 1815, a 'Treatise on Dairy Husbandry,' makes no reference to cattle of the Channel Island breeds. Dr Douglas rightly places great weight on Aiton's work. Two contemporary bits of evidence support the accuracy of this author. In the first place the pictures of a cow and bull published by him were approved by the Kilmarnock Farmers' Club. Secondly, that renowned and

shrewd dairy farmer of Glasgow, William Harley, refers to Aiton's work as "interesting and very accurate."

Mr MacNeilage briefly refers to a Hereford cross introduced by Mr Swan, Lochwinnoch, but I can find no other reference to this, and consider it is not of major importance. The 'brocket' face still to be found in the unpedigreed stock of the South-West is not descended from this cross, though inherited in the same manner as the white face of the Hereford. Brocket-faced cows were reported in Scotland before the establishment of the Hereford breed in England.

Beyond the well-authenticated use of the blood of Highland cattle in the herd of Theophilus Paton of Swinlees, there is no other record, or even suspicion, of the introduction of extraneous blood in the improvement of Ayrshire cattle other than as already noted.

Reverting now to the influence of the Dutch cattle direct, or through the forerunners of the Shorthorn breed, it is found that John Speir was of opinion that "the Ayrshire breed of cattle, where approximately pure, are direct descendants from Dutch ancestors imported between 1550 and 1700 or later, and are not a breed gradually evolved from the native animals in the country at that period." He bases his conclusions largely on colour. The present writer has made a particular study of the inheritance of coat colour in cattle, and has reached the conclusion that, so far as the true story of the evolution of a breed is concerned, colour may give a most unreliable indication. For instance, mutation may occur whereby a colour foreign to a type may suddenly arise. Should this happen in the case of a good animal, breeders are almost certain to associate the good qualities with the colour. In a matter of two or three generations it is possible to change the colour of a breed if it is thought desirable to do so, particularly when it is a case of eliminating a dominant, as happened to the early Ayrshire, which was black.

The conclusion of John Speir is based on the contemporary evidence of Colonel Fullarton, an M.P. for Ayrshire, and the writer of the Report on that county to the Board of Agriculture in 1793, and must therefore be treated with respect. As already stated, Dr Douglas also attributed to Dutch influence a considerable part of the improvement in Ayrshire cattle.

Against this we have some evidence of William Harley, an acute man who conducted a system of mechanised dairy farming in the city of Glasgow in the early years of the eighteenth century. His herd numbered over 100 cows. He exercised great care in the selection of his cows, and tried out animals from all parts of the United Kingdom, especially Shorthorns. Harley came to the very definite conclusion that Ayrshire cows were the most suited to his purpose. He preferred middling and larger sized cows, with, amongst other



things, "horns small, clear, and bent . . . legs small and short, with firm joints; the udder square, but a little oblong, stretching forward. . . ."

From this we can deduce a type different to the Dutch or Shorthorn type, and larger than the old native type of Ayrshire. To my mind this disposes of Colonel Fullarton's suggestion, adopted by John Speir, that the breed of Ayrshire cows at the beginning of the eighteenth century was a new type to the district. Certainly it was different to the original type. The difference can have arisen either by selection within the native type, or by an admixture of the imported animals. As to which is the correct solution can never be determined, but, in view of the fact that some of the cattle imported into Ayrshire were outstanding animals, I incline to the suggestion that certain of their good qualities were incorporated into the native stock, and an improved type of Ayrshire cow was the result, combining the milking capacity of the imported animal with the inherent hardiness of the native type.

Be this as it may, it cannot be denied that the first credit for the Ayrshire cow rests with certain farmers in Ayrshire who made use of certain opportunities and created a type of dairy cow with a definite and characteristic type of udder which, to this day, distinguishes the Ayrshire from all other breeds of cattle.

In proof of this we have only to compare two pictures. The first is that published by Aiton, with the approval of the Kilmarnock Farmers' Club, in the year 1814; the other is the portrait by Howe ("Breeds of our Different Domestic Animals, 1829") of two cows which were awarded 1st and 2nd Premiums at the Highland and Agricultural Society's Glasgow Exhibition of 1828. In Aiton's portrait, which is confirmed by Garrard's of 1805, we find, as Dr Douglas points out, much that is suggestive of the Dutch cattle; while in Howe's portrait we can trace the essentials of the modern Ayrshire, wedge-shaped, deep-bodied, and short-legged, with an udder carried well forward to a well-developed milk vein, and full behind.

There are plenty of grounds for giving the farmers of the district full credit for the development of this type. They were shrewd men, and both in published writings and private documents there is ample evidence to show that they set great store on their cattle. One such document is worth quoting, for it shows that there were good cattle at Rowallan more than 300 years ago: it is the will of William Muir, elder, of Rowallan, Kilmarnock, and runs:—

"The said Williame had pertaining to him, the tyme of his deceis, Fourscoir and thrie tydie ky—Furrow ky, with thair stirkis, fourtie ane—Thrie bullis—Nyntein stottis and quoyis of thrie yeir auld. . . ."

## DEVELOPMENT OF THE BREED.

Prior to the nineteenth century the breed historian is on very insecure ground in attempting to attribute credit for the development of the breed to individual persons. But the beginning of the new century brings us more definite information, and from this there emerges as outstanding the name of Mr. Theophilus Paton of Swinlees, Dalry, born in 1778, and who died in 1872. As a young man he visited America, and his herd probably came into his hands about 1810. Mr Paton's brother, Will, dealt in Highland cattle, and through him there was introduced into the herd a Highland heifer, probably from Ensay in Skye. The first progeny was a red heifer calf, "but the dam in milk exhibited such pre-eminent qualities of teat and udder that he again so mated her for years."

There is sufficient evidence to justify us in concluding that the Swinlees herd was outstanding in its day and won many prizes round about 1835 and the following years. It was about this time that the Ayrshire began to have stronger horns, with the points turned upwards instead of inwards as formerly. Owing to its breeding, the Swinlees herd would have stronger and more upturned horns than Ayrshires generally. Mr Speir points out that "bulls from this herd were not only spread all over the country, but were introduced into almost every herd of importance." He adds that the change was very gradual, "for as late as 1860 a large porportion of Ayrshires had incurved horns."

The herd of Mr Parker of Broomlands, Irvine, took its origin from Swinlees, and its owner succeeded Mr Paton as the successful winner in the showyard, where his stock were noted for their style. From this we may conclude that the Ayrshire, as we know it now, derives its milk vessel from the native cow of the district from which, together with the importation of some Dutch blood through Yorkshire, it gets its capacity for milk production. Its stylish appearance is almost entirely the work of the local breeder, but possibly the set of the horns is due to the slight infusion of Highland blood. There is evidence which shows that breeders in Ayrshire had the ideal of the compact udder and well-placed teats before the use of the Highland cow at Swinlees. How much this cow helped to fix the type will ever remain a matter of conjecture. She probably helped, but it is quite certain that she alone is not responsible for this definite characteristic of the Ayrshire.

It was about this period that the young breed received help from the Highland and Agricultural Society. In 1814 the Society offered prizes for bulls and heifers in the Kyle district of Ayrshire, and the breed is, for the first time, referred

to publicly as the Ayrshire. Local premiums were again offered by the Society in 1816, 1818, and subsequently. In 1826 (the year of short corn) the Annual Show was held in Glasgow, the magistrates made a donation of £50, and as a result the number of classes for Ayrshires was increased. There were twenty-seven entries in the cow class and twenty-two for bulls; in the latter class all the prizes went to Stirlingshire, where the breed was much encouraged by the Duke of Montrose.

In 1835 the Highland held its first and only show at Ayr, where a bull of Swinlees breeding, "Jock the Laird," took a



Fig. 22.—Ayrshire Bull, "*Geordie*."

From the painting in the possession of the Highland and Agricultural Society

prize. In this year the Ayrshire Agricultural Association was founded.

Anyone desirous of information about the bulls of this period should study the comprehensive article on them by the late editor of the 'Scottish Farmer,' Mr MacNeillage, which appeared in these 'Transactions' for 1901. Mention must be made of a bull called "Geordie," bred by Mr Walker of Kilbirnie, which was a first prize winner at the Glasgow Highland in 1838, first as an aged bull at the Ayrshire Show at Dalry in 1839, and first at the Inverness Highland in the same year. This bull may be said to be the forerunner of the Show bull, and his picture, compared with that of the

type of bull prevalent at the middle of the nineteenth century, shows a marked improvement in appearance ; for these reasons his blood was widely spread throughout the breed.

In addition to the herd of Broomlands, which owed much to Swinlees, there was that of the Drews. Mr Lawrence Drew, Sen., of Carmyle, Tollcross, and his son, of Merryton (the great Clydesdale breeder), were both friends of Mr Paton. The latter bred the bull " Burnhouses " (8), owned by James Howie of Burnhouses, Kilmarnock. This bull, calved 1865, was to the Ayrshire breed what " Champion of England " was to the Scotch Shorthorn. " His female progeny," says Mr MacNeilage, " were full of style, with grand frames and rightly hung vessels, while their teats were rightly planted and of the proper dairy size." His sons were used far and wide.

At this point it is right to mention a cow that, for better or for worse, appears to have had a considerable influence on a section of the breed. Her breeding is probably unknown ; she was picked up by a cheese merchant and sold to Lawrence Drew of Merryton. She was called variously " Drew's Wee Black Cow " or " Mrs Baird." She was undersized in every way, but her vessel was very tight and level, and this carried her to victory at shows for many years. Her teats were small, and are alleged to have required ' setting.' Bull calves off her were used everywhere, and did much to impair the usefulness of the Ayrshire as a dairy cow. It is sad to recall that at the last show at which Mr Parker of Broomlands exhibited—Ayr, 1874—in the Derby class his quey had to take second place to a daughter of " Mrs Baird."

" Mrs Baird " introduces a peculiar development in the Ayrshire breed. In the South-West of Scotland it had long been customary for the women-folk to do the milking. According to some authorities it was therefore considered suitable that the teats of the cows should be small. At the same time a group of breeders endeavoured to improve on the distinctive character of the Ayrshire cow without considering that her primary purpose was the production of milk. In breeding the vessel type they endeavoured to obtain an udder of characteristic shapeliness and attachment, the floor, or ' sole ' of the udder being flat, or nearly so, and the fore-udder carrying far forward with a neat attachment to the abdomen. The teats were small and squarely placed. In this type of milk-bag the ordinary swelling previous to calving is frequently very pronounced. This abnormal swelling led to the practice of ' boarding,' which is the compression of the udder upwards by means of boards, which enabled the operator to shape the vessel almost as he pleased. Finally, to gild the lily as it were, the teats were set with collodion. Such cows also appeared to have an inherent tendency to compactness of form and a certain degree of fleshiness not usually associated

with a dairy cow. From these beginnings a group of breeders evolved the 'vessel-bred' cow, which, in the opinion of some, for sheer beauty of form and symmetry, has never been surpassed by any class of farm live stock in the agricultural showyard. Others, equally competent in stock judging, held a very low opinion of these animals, which were extremely small, and fetched but inferior prices as dairy cattle. "Wee titted rats" has been applied to them. Photographs of the winning animals justifies this description, though it is only fair to add that there were a few notable exceptions.



Fig. 23.—Ayrshire Cow, "*Betsy of Drumter*."

At the age of 17 years    Born about 1860

### *The Herd Book.*

So much then for the trends of breeding prior to the establishment of the Ayrshire Cattle Herd Book Society in 1877, under the auspices of the Ayrshire Agricultural Association. During this decade were founded the majority of the breed societies now in existence, and the Ayrshire farmers likewise consolidated their breed by the publication of the first volume of the Herd Book in the year 1878. This gives an opportunity to review the trend of the breeders in the years following the establishment of the Ayrshire as a recognised breed. Already has been described the start of the craze for the perfect udder when the cows were judged almost entirely on

this point, with very little attention paid to conformation or legs, and quite irrespective of milk production.

In contradistinction to these 'vessel breeders,' as they came to be known, was a group of breeders who placed great emphasis on appearance, particularly of the bulls, and much less on the shape of the udder. While more concerned with milk yield, it cannot be said that in the early days the 'show appearance' men considered it as the dominating factor. It is not possible now to determine when this deviation took place, but it was marked by the 'eighties of last century.

In the development of this 'show appearance' or 'yeld

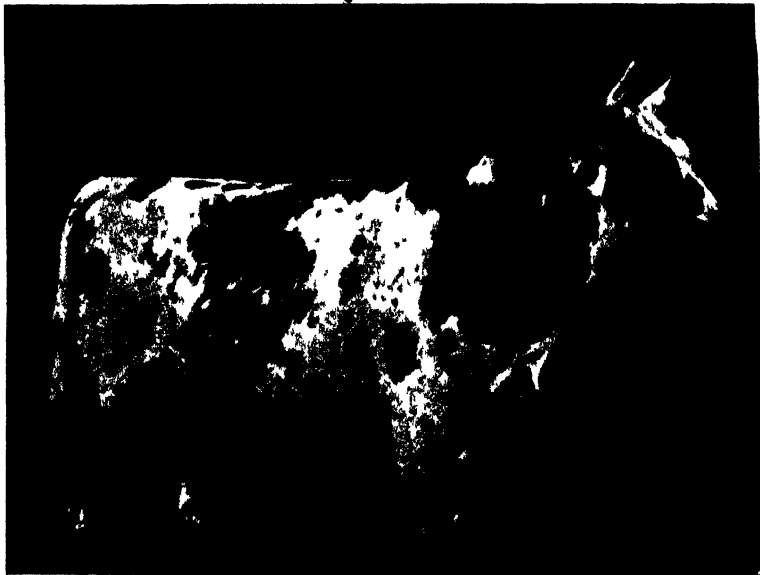


Fig. 24.—*Ayrshire Bull, "Hover-a-Blink" (892).*

Born 1881

stock' line of the breed, the next bull deserving of mention is "Hover-a-Blink" (892), calved in 1881, bred by Mr Hutchison of M'Coshton, Stair, and used successively by Mr Osborne of Drumjoan, Ochiltree; Mr William Bartlemore of Lochwinnoch, grand-nephew of Theophilus Paton; Sir Michael Stewart of Ardgowan. He was sired by "Outmains of Craighdu," a son of "Geordie III.," and out of a cow called "Whitie." Mr MacNeilage reports that "Hover-a-Blink" resembled the famous bull "Geordie," already described. But, from a comparison of photographs, one would say that he was definitely an improvement on his probable ancestor. "Hover-a-Blink" was champion at Ayr, 1884, 1885, and 1886,

while four of his sons secured the same honour, and all of them were at one time or another first prize winners at the Highland Show. His daughters were uniform, fine milkers, with fairly good vessels, and the most useful kind of teats.

The value of this bull and his descendants, as well as the value of the animals bred in the Drumjoan herd, have been admirably analysed in a genetic study of the Ayrshire breed which has been made by Mr Fowler of the Hannah Research Institute. Mr Fowler has shown how their blood dominates the pedigrees of the high-milking cows of the present day. Although it anticipates the future story of the breed, it is suitable to mention here that Mr Fowler states that throughout the breed there has been a steady increase in inbreeding since 1878, and that this has occurred mainly to the two foundation sires, "Burnhouses" and "Hover-a-Blink." From this study it may be concluded that inbreeding was more prevalent amongst the vessel breeders than amongst those who placed more emphasis on milk yield, but that within the latter class of breeders it was apparent that inbreeding by itself had no deleterious effect on high yield. From a study of the pedigrees of the high-yielding cows of around 1928, Mr Fowler has drawn attention to the great influence of the Drumjoan herd. Apparently Mr Osborne (like Cruickshank of the Shorthorns) recognised the value of "Hover-a-Blink," and made the fullest use of his blood in the development of the Drumjoan herd, with the result that the influence of this herd is marked amongst the high-yielding cows of the present day.

In connection with inbreeding, it is only right to note that in comparison to other breeds of cattle, the Ayrshire shows very little inbreeding. There has been continual admission into the Herd Book of animals with four top crosses of pedigree sires. These animals are graded up from the ordinary stock of cattle in the South-West of Scotland, in which, of course, the blood of the Ayrshire predominates.

### *Milk Recording.*

To John Speir of Newton, Scottish farmers—and particularly Ayrshire breeders—owe an undying debt, for he was the pioneer who, with the help of the Highland and Agricultural Society, started milk recording in Scotland in the year 1903. In 1907 the work was transferred to the Ayrshire Cattle Milk Records Committee, and later to the Scottish Milk Records Association. Mr John Howie, who was for many years Secretary of the Breed Society, has been Secretary since the start. By 1909 there were 13 circuits, with 193 members and 8132 tested cows. The names of some of the farmers who had

much to do with the extension of this work are worthy of record.

The Carrick Society was started by John Stevenson of Balig, Ballantrae; Central Ayrshire by James Howie of Hillhouse, Mr Kilpatrick of Craigie Mains being an early member. The Cumnock District owed its existence to Adam Montgomerie of Lessnessock; James Dunlop of Midland was Secretary to the Fenwick circuit. Lesmahagow was due to Dr Douglas of Auchlochan, and Leswalt to John M'Caig of Challoch. Mr W. H. Ralston, factor of Dunragit, was responsible for the Rhins of Galloway. Sir Hugh Shaw Stewart was President in the early days.

The value of milk records was soon appreciated, and this accentuated the difference between the two types above referred to. In 1906 we find the leading farmers of the dairy type petitioning the Highland Society that awards to Ayrshire cattle be given to "a type eminently suited for dairy purposes." Amongst the signatures are the names of Sir Hugh Shaw Stewart of Ardgowan, A. Y. Allan of Aitkenbar, H. W. B. Crawford of Chapmanton, James Howie of Hillhouse, Adam Montgomerie of Lessnessock, John Speir of Newton, J. Harling Turner and Robert Wallace of Auchenbrain.

At about this period the vessel breeders were on the crest of the wave. It was found that the bulls that sired the cows with the desired type of vessel were not show animals, being selected from udder pedigree alone. The award of prizes for bulls led to the development of the show type of bull, but the exhibitors of the 'milk stock' kept their attention on the shape of the udder.

At the office of the Herd Book Society is a series of photographs of the champion bulls and cows at the Ayr Show from 1886 to the present day. A glance at them reveals the great difference in type between the male and female stock. As time went on, the breeders of bulls and young stock left formation of the milk vessel more to chance, and became more and more bent on appearance. Despite this, the proportion of show stock of both types and of other unregistered animals was small. Many breeders were in the habit of selecting their bulls from good milking cows belonging to themselves or to neighbouring herds known to them, and this method of selection had more to do with the maintenance of the milking qualities than had the showyard system. The institution of milk recording recalled to breeders of both sections the main purpose of the Ayrshire cow at a time when milk yield was inclined to be overlooked.

Looking back at the vessel type, it is possible now to discern the importance of the bull "St Barchan of Mansurae" (4639), calved in 1900, and bred by Robert Wilson, who had long been concentrating on this class. Amongst other breeders



we find T. C. Lindsay with the Aitkenbrae herd ; John Murray of Carston and his nephew Jacob Murray of Dalgig (the young stock of this herd was taken over by Commander Billyard Leake of Hollybush) ; the three generations of David, Alexander, and Thomas Cross at Knockdon ; William Howie of Burnhouses ; John Clark of Dunrod ; the MacAlisters of Ardyne, Mid Ascog, and Meikle Kilmory ; James Mackie of Riggfoot ; and Adam Mackie of Hall of Auchincross.

At this point the present writer refrains from mentioning individual animals, for the true value of individuals born since 1910 will only be assessed in the future when the trend of the breed at the present day is definitely ascertained, and individuals can be seen in proper perspective. Furthermore, the present writer does not consider himself competent to enlarge upon the showyard merits of the heroes and heroines of the day.

### *Recent Trends.*

Enough has been written to show the differences that were rising within the breed in the first quarter of this century, and which came to a head about 1920 when the Breed Society had its two rival sections. For many years prior to this date breeders were led to think that the type for which they should breed was the class of cow exhibited at the Ayr Show and the type of heifer winning the Derby year after year. This was true also for breeders overseas, who, especially in New Zealand and Australia, found that the standard of the imported animals was, from the dairy point of view, lower than those of the breed which they already possessed. The opinion of one of the vessel breeders, Mr Alexander Cross of Knockdon, is worthy of record ; he is reported—"the Derby quey was never expected to give milk." Certainly many of them did not.

In 1921 the Ayr New Show was instituted. The promoters stressed yield of milk, but did not neglect conformation, the animals being judged on a system of points based on appearance and milk yield. This, and the four succeeding Shows, were run by the Executive of the Breed Society, and supporters of both sections were on the Committee. Two well-known vessel breeders were among those who acted as judges. Though the Shows were well supported by the public, they were abandoned when it was found that in Scotland one breed alone cannot receive sufficient support to make a Show a financial success. But these Shows did good work, for they brought the different parties together and emphasised the value of milk recording. These five New Shows provided what some consider to have been the finest exhibitions of Ayrshires ever seen, and certainly did the breed an immense

amount of good. Moreover, by the time the Fifth Show was held, practically every animal exhibited obtained full points for milk yield.

It was, however, the London Dairy Show of 1923 which gave the breed its greatest flip. The type of cow exhibited there was the product of the New Show. It carried everything before it, winning the inter-breed Bledisloe Trophy.

The late Robert Wallace of Auchenbrain was one of the most far-seeing breeders who ever bred an Ayrshire cow. Although this herd has splendid milking performance, it has not lost its general conformation or appearance. Other prominent exhibitors in the yeld stock section were (and are) James Howie of Hillhouse (now of Muirside); the late Robert Osborne of Morton Mains; the late Robert M'Kinlay of Hillhouse; the late Michael and Andrew Logan of Bargenoch and Overton respectively; Sir Hugh Shaw Stewart of Ardgowan, for many years Hon. Secretary of the Highland; the late Andrew Clement of Netherton; Adam Montgomerie of Lessnessock; Colonel Houldsworth of Threave; the Wallaces of Linnhead; Walter Adamson of Harleyholm; T. B. M'Gregor of Lesserlinn; the late John Cochrane of Nether Craig, and his son, Alexander, who produced the first three-thousand-gallon Ayrshire, "Nethercraig Janet" (Mr Cochrane also bred "Nethercraig Nana," world's senior four-year-old record, and owns "Killoch Betsy," record Ayrshire daily yield of 114 lb. in 24 hours); and also the sons of the Logans, now of Low Milton, Burton, Bargenoch, South Craig, and Overton; and the sons of Auchenbrain who carry on there and at Lyonston and Chapelhill, as well as many others.

To these names falls to be added that of Thomas Barr of Hobsland, who bred a type of his own that made a strong appeal to breeders in the U.S.A. and Canada. In Canada, Hobsland stock milked well and won almost everything, frequently being at the top for milk as well as for show. Mr Barr was a big feeder, and believed in growing his stock to a big size. Certainly no one could bring them out better than he could, either for show or for the sale ring. They were noted for their big deep bodies with plenty of heart room. His cattle were of real value to the breed in that they preserved the conformation of the yeld type when there was a real danger of this being overlooked in a search for super-yields.

At the end of the war there was a definite tendency for some of the yeld stock men to place too much emphasis on high yield. They searched for this at the expense of vessel and body conformation, and particularly of legs. This fact led certain breeders, more notably J. N. Drummond of Bargower and Alexander Kirkpatrick of Barr, to incorporate into their herds the blood of vessel-bred or 'milk stock' animals. Generally speaking, this policy has not been always

successful, since the milk yields were frequently depressed, or the teats became extremely small. There are notable exceptions in the case of the good cow "Barr Dairy Queen," sired by the vessel-bred bull "Dalgig Speculation," and which was exported to the States. The bull "Riggfoot Paymaster" (23,854) used in the Bargower herd was on both sides of the pedigree a great-grandson of "St Barchan of Mansurae." Cattle of this breeding have been winning in this country and overseas.

It is the cattle of the New Show description that have led to the Ayrshire assuming a leading position amongst the great dairy breeds of the world. Since 1923 at the London Dairy Show, Ayrshires have won the Bledisloe Trophy no less than seven times in fourteen years—no mean achievement for a breed that had not obtained much more than local importance, and a still greater tribute to the men who have made it what it is.

Meanwhile the vesselled men pursued their way, but many of them, too, have been influenced by the general trend. Herds are recorded, and there has been a steady improvement in yield. Some lovers of the old type claim that the conformation is not quite what it was. To the modern eye, however, they have still a most wonderful type. Prominent amongst the vessel breeders must be numbered John Drennan, Hillhouse, Galston; the younger Barclay of Rigghead; R. L. Angus, Ladykirk, Monkton; Donald Cross, Knockdon, Maybole; William Howie, Ingliston, Bishopton; Alexander Hunter, Laigh Langside; Robert M'Alister, Mid Ascog; James M'Alister of Meikle Kilmory; Robert MacKay, Bruchag; Robert Paton, Pishgah; Andrew Mackie, Riggfoot; and A. & J. Mar, Blackbyres.

Thus we see that not only have the New Show breeders sought for blood from the vessel men, but these have, in turn, obtained milk from their erstwhile opponents. While it is not possible for the dispassionate observer of the Ayrshire breed to praise the craze which led to the development of the vessel type, it is only justice to state that this type has recently made a definite contribution to the breed, and probably will continue to do so in the future. It must never be forgotten that one of the great characteristics of the breed—the character most envied by the supporters of other breeds—is the shape of the udder. To the present generation the udder of that great cow, "Meikle Kilmory Rosary," is about as near perfection as it is possible to get in this world.

Truly, the Ayrshire furnishes a remarkable example of the importance to a breed of allowing the parallel development of different types. Looking at the matter from a scientific standpoint, it is of prime value to a breed that it should contain within its borders a reasonable variety of types and

blood lines. To the Ayrshire it would have been catastrophic had one type ever completely exterminated the other. No one can foretell the demands of the future, and what the market of even a quarter of a century hence will demand. If there is only one universal type, it is difficult to modify it sufficiently quickly to adapt it to the new requirements. If there are various types, adjustment may be more speedily made by suitable crosses.

A study of the history of the Ayrshire breed and the wordy warfare of the protagonists of the different types hardly leads to the deduction that the evolution of the breed along two distinct lines with suitable sub-types was the result of



Fig. 25.—Ayrshire Cow, "*Meikle Kilmorey Rosary*" (91.252).  
Born 1923.

conscious planning by those responsible for its destiny. Nevertheless, the fact remains that it is due to this diversity that the Ayrshire has reached her present position, and can look to the future, not with complacency, but conscious of the possession of a full count of talents.

The other fact that emerges—and which really accounts for the first—is that the individual breeders have not allowed themselves to be standardised, but have each endeavoured to produce for himself a type of cow suited for that special purpose of making the best return to the owner in relation to environment, the land, husbandry, and market.

Picture the Ayr Derby of 1874, the last Show at which

the veteran, Mr Parker of Broomlands, exhibited. Picture the sorrow of the old man, who so believed in utility, when over the head of his own quey was placed the daughter of "Mrs Baird," the wee black cow of Lawrence Drew of Merryton. The rift in the breed marked by this event has not been entirely healed, but the bad feeling it engendered for many years has disappeared. At the end of half a century we can look back and see the good points of both sets of protagonists and appreciate the contribution that both have made to the modern Ayrshire.

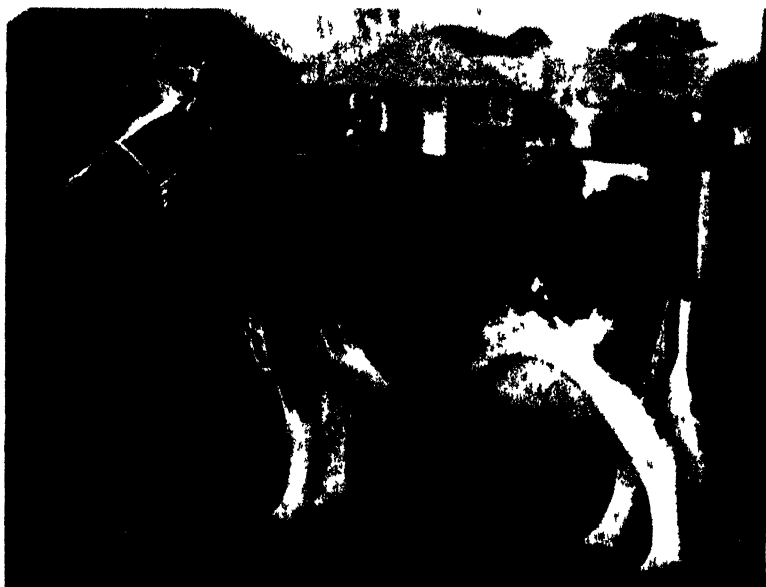


Fig. 26 —*Ayrshire Cow, "Howie's Dairy Lass 3rd" (44,126).*

Bred by James Howie & Sons, Muirside. Female Champion, R.A.S.E., Bristol, 1936

### *Modern Developments.*

Two recent developments in the breed must be recorded. The first is the spread of tuberculin testing. The value of this was soon recognised by progressive breeders. Recent legislation in the United Kingdom has established what are known as 'attested' herds, which are under the direct supervision of the Department of Agriculture for Scotland. That there are in Scotland over 250 such herds is a tribute to the work of Scottish breeders. The total number of cattle in these herds is over 21,000, of which all but about 250 are Ayrshires. In addition, there are in Scotland about 500 herds licensed to produce Grade A. (T.T.) milk under the super-

vision of the local authority. The great majority of these are Ayrshires. Many of the herds are also tested regularly for contagious abortion (Bang's disease).

The other development is the emphasis placed on the proven sire. After giving the problem considerable thought, the Council of the Society asked Dr M'Candlish and Mr J. P. Struthers of the West of Scotland College of Agriculture to draw up a register of proven sires, bulls with ten or more high-yielding daughters entered in the Record of the Scottish Milk Records Association between 1917 and 1934. The standard of production of the daughter is a yield of 280 lb. butter-fat as a cow, or 224 lb. as a heifer, with the subsequent calving within fifteen months. 884 bulls have qualified, and the list of names has been published in recent issues of the 'Ayrshire Journal.' Herds credited with the production of twenty or more proven sires are: Auchenbrain, 61; Howie's, 43; Lessnessock, 42; Hobsland, 36; Netherton (Clement), 22.

In addition, Dr M'Candlish and Mr Struthers maintain a list published in the 'Journal' of living proven sires, which gives details of the yields of their daughters, the length of the lactations of these animals, and the figures converted to a mature basis, as well as the yields of the dams of these daughters. Outstanding in the last list published is "Nether Craig Select," whose twelve daughters' age-corrected yields averaged 1286 gallons at 3.97, 510 lb. butter-fat, as compared to their dams, which gave 1073 gallons at 3.94, 423 lb. butter-fat. In deciding not to use a 'Bull Index,' the Council were of opinion that such figures are apt to be misleading, and that the raw data is of most use to a breeder in enabling him to assess the value of a bull.

The first issue of the 'Ayrshire Journal' appeared in March 1929, and is published quarterly. It includes the activities of the breed in England.

#### FURTH FROM SCOTLAND.

##### *England.*

There is no exact information as to when Ayrshires crossed the border into England. The first record appears to be that by Farrall in 1876, who reports Mr Alexander M'Caw as possessing a herd of 100 cows near Cockermouth, but this was not a pedigree herd. The existence in Cumberland and Westmorland, so close to the Ayrshire country, of some of the best types of commercial dairy cattle in England, suggests either a common origin of the breeds, or else the possibility of some interchange of blood. As the Ayrshire breed was developed in Ayrshire we can dismiss the possibility of a common

origin, since there cannot have been much communication between Ayrshire and Cumberland previous to the consolidation of each breed type.

The possibility of subsequent interchange of blood is, however, exceedingly likely, although it must remain to some extent a matter of conjecture. However, once the Ayrshire breed gained a footing on the shores of the Solway, it is almost certain that this must have occurred, though it is almost impossible to determine whether either the Ayrshire or the Cumberland Dairy Shorthorns were improved thereby. Both breeds have 'open' Herd Books, and even at the present



Fig. 27.—*Ayrshire Cow, "Grange Rosebud 2nd" (8873).*

World record 305-day producer, over all breeds    The only cow in the world to  
make over 1200 lb butter-fat in 305 days    Born 1926, aged 10 years

day there are breeders who are 'grading up' on foundation cows of the type of the other breed.

Moreover, it must be remembered that the Ayrshire mates exceedingly well with the Shorthorn, and produces a type of heifer well suited to certain kinds of English farming, though Shorthorn enthusiasts maintain that two top crosses of their breed are desirable. It is difficult to obtain figures, but there can be little doubt that, at the present time in England, an appreciable number of Shorthorn cows of the dairy type are being mated to Ayrshire bulls, and that there is a definite demand for such cattle. The writer's personal experience of Dairy Shorthorns in Cumberland leads him to believe that

not a few of the cows in some of the best commercial herds trace back to an Ayrshire cross.

As a breed, however, the Ayrshire at first made little headway over the border, especially when compared with the progress it made abroad. In Volume II. of the Herd Book (published in 1879) is given a list of members, of which four lived in England, and of these only two made entries. In 1900 Volume XXIII. shows little change in this respect, there being still four members, though none of them made entries. In this volume are recorded four Irish, one Welsh, one Swedish, and three Australian members; there are several entries under Scandinavian names.

As Scottish farmers went south to try their fortunes in England they took their cattle with them, but most of these were unregistered. In 1914 only four animals from England were entered, and in Volume XXXIX., published in 1916, we find only some nine members resident in England, but amongst these is Charles H. Sanderson of Newlands, Belford, Northumberland.

The London Dairy Show of 1923 and subsequent years has changed all that, and there are now in England 216 members. In addition, there are many non-pedigree herds scattered throughout the country. The quality of some of the herds is of the highest order. While great emphasis is laid on milk yield, conformation is not neglected. England has to her credit "Grange Rosebud 2nd," who, though bred in Scotland, has given an average in three lactations of 2331 gallons at 4.6 per cent, 1073 lb. butter-fat.

The breeders in England are members of the parent Society, but there is an English Committee to foster their interests. Undoubtedly one of the reasons for the expansion of the breed in England is the fact that the majority of the herds in Scotland are free of tuberculosis, and English buyers of dairy cattle can rely on the stock from such herds. At the present time there is a big trade in in-calf heifers from Scotland for the tuberculin tested herds in England.

#### *United States of America.*

Theophilus Paton was born at Swinlees, Dalry, on 4th April 1778, and lived to the ripe old age of ninety-four, dying on 18th April 1872. In 1810, at the age of thirty-two, he visited the young United States of America. For such a man surely it is not stretching fact too far to assume that his visit was not entirely unconnected with the Ayrshire breed. From Glasgow many ships sailed across the Atlantic, and on the better sort, for the convenience of the passengers, a cow would be taken. Though we have no direct evidence, it is inconceivable that the owners



and masters of the ships were unacquainted with the extraordinary dairy conducted in that city by Mr Harley, an able man and a cunning advertiser of his wares. Mention has been made of Mr Harley's preference for the true Ayrshire breed. So it is impossible but to draw the conclusion that Ayrshires were shipped to America in the early years of last century.

But the first importation of which I can find definite record is that reported by the Sturtevant's. In 1822 a bull and a cow were sent *via* New York to the farm of Mr Hezekiah Hills at Windsor, Conn. Further importations were made



Fig 28 —*American Ayrshire Cow, "Penshurst Champion Princess"*  
Half-sister, by same sire, to "Penshurst Man-o'-War" Lifetime record,  
100,685 lb milk at 4 4 per cent, 4430 lb fat

in 1828 and 1831, while in 1837 two bulls and seven cows arrived, some of which were for the Massachusetts Society for the Promotion of Agriculture, which arranged for subsequent importations in 1845 and 1858. Other importations took place in 1838, which marked the start of a long series by Captain Randall of New Bedford. Thereafter Ayrshires arrived in the United States with almost monotonous regularity, both bulls and cows.

The first American Herd Book was published in 1863, while the first volume of the Scottish Herd Book did not appear till 1878. This early volume appears to have been highly inaccurate, and in 1875 was published the North American

Ayrshire Register, which was subsequently merged with the official Ayrshire Record (New Series). The Ayrshire Breeders' Association was founded in 1875, and thus by two years anticipated the 'parent' Society of the United Kingdom.

The story of the breed in North America is not dissimilar to that in this country, save that less emphasis was laid on the vessel type. Evidence of this is to be found in a letter written in 1890 by Mr Winslow, Secretary of the Ayrshire Breeders' Association of America, himself a breeder. He wrote: "The great secret of the success of the Ayrshire as a dairy cow is her digestion, enabling her to extract and turn into milk and



Fig 29 —*American Ayrshire Cow, "Iroquois Sally Winters"*

100 000 lb producer and first cow in U S A to complete 10 years of Herd Testing

butter the largest possible amount of return for the food consumed." He goes on to stress the importance of economic food conversion. This has always been appreciated by a group of breeders in this country. Concentrating, as they have done, on production the North American breeders have never been slow to pick up the best they can find in Scotland, and more particularly so since the post-war revival of the breed.

At present the Ayrshire breed is chiefly concentrated in the North-Eastern States, which include about two-thirds of the breed in the U.S.A., though herds are to be found in thirty States of the Union. In New York State the herds are most

numerous. To the Ayrshire breeders in the U.S.A. belongs the credit of appreciating the importance of the 'Herd Test'—i.e., the recording of every cow in the herd—a lesson learnt from the admirable system so long adopted in Scotland. Now most of the dairy breeds across the Atlantic are falling into line with the Ayrshire. For 1934 the average of the Ayrshire herds so tested was 862 gallons at 4.06 per cent and 351 lb. butter-fat. At the present moment there are over 11,000 Ayrshires on test, and it is claimed that no other breed has such a high percentage of its cows on the test.

With the very marked expansion of the fluid milk (retail or bottled) trade in the United States, an increasing number of larger city markets have adopted regulations requiring that milk test from at least 3.8 per cent to 4 per cent. These regulations have given a great impetus to the Ayrshire business, for the United States farmer has learned that no other breed makes so much milk with a 4 per cent test as the Ayrshire. In some cities, such as New York (the world's greatest milk-consuming centre), the legal standards are not quite as high, but a substantial premium is paid for Grade A. milk, which must test 4 per cent and also have a relatively low bacteria count. The fact that 'Certified Milk' standards require approximately a 4 per cent test has also focussed attention on Ayrshires, both through creating a demand for them and also because of the favourable attention directed to 4 per cent milk.

In the North Atlantic States almost all the milk produced is sold as cream or milk: there is little cheese or butter manufactured. It is this that has given the big impetus to the extension of the Ayrshire breed. But another point is the adaptability of the Ayrshire to the rough conditions prevalent in these States. At the same time the breed is making definite progress in the lush 'prairie' States of the Middle West, and particularly where the milk is required for immediate consumption and the 4 per cent butter-fat is essential.

Several notable animals have been produced, of which perhaps the most remarkable is "Penshurst Man-o'-War" (1920-29). 151 daughters of this bull averaged 1094 gallons and 451 lb. butter-fat (yields calculated to maturity): he left 183 registered daughters and 153 registered sons. His breeding is a combination of the blood of Auchinbrain and of the herd of the late Andrew Baird of Garclaugh.

America claims the world's record grade cow, "Brownie," sired by a pure-bred Ayrshire bull and out of a grade Ayrshire cow.

#### *Canada.*

According to the first volume of the Dominion Ayrshire Herd Book (published in 1872), the first importation to Canada

took place about 1845, when Mr J. B. Ewart of Dundas, Ontario, imported the Ayrshire cows "Beauty" (25), "Maggie" (26), "Creampot" (27), "Queen Victoria" (28), and also probably the bull "Napoleon" (19). In 1849 Robert Gray of Frederickton, New Brunswick, imported "Jock-the-Laird" (97). "Bonny Lass" (12) was imported by the Hon. C. E. Jones in, or before, 1850, as she is credited with a calf, "Pet" (193), born in Canada in that year. To Quebec the first Ayrshires went in 1851, a bull, "Sandy" (31), being imported by the Hochelaga Agricultural Society of Montreal. Sir James Logan of Montreal imported the bull "Buttery" in 1853 (the Sturtevant's state "Buttery" was a cow, and that the name of the bull was "Baldy"). In the same year the Montreal Agricultural Society made the first of several importations with the bull "Rob Roy," and a cow imported by Mr J. W. Duncombe of Quebec. Subsequently importations were made to Canada almost yearly.

The Canada Ayrshire Breeders' and Importers' Association was established in 1870, and the Dominion Ayrshire Breeders' Association in 1872. Both were *bona fide* Herd Societies, and issued Herd Books, but finally amalgamated in 1898 to form the Canadian Ayrshire Breeders' Association. The Society now publishes monthly the 'Canadian Ayrshire Review.'

In the Dominion the breed is strongest in the Provinces of Quebec and Ontario, with some good herds in British Columbia and the Prairie Provinces, as well as farther east. There are, in all, nearly 2000 breeders. The breed is particularly popular with French Canadians, and the 'Canadian Ayrshire Review' is bi-lingual. The Association combines with twenty-six others to form the Canadian National Live Stock Records (this excludes the Holstein), of which the Ayrshire is the leading dairy breed.

The official records for the year ending 15th October 1935 show that 2374 mature cows averaged 1189 gallons and 473 lb. fat. The record of the nine-year-old "Nellie Osborne" deserves mention. She has a lactation yield of 2720 gallons at 4.62 per cent and 1257 lb. butter-fat. Another cow, "Springburn Lovely Pet," bred by Gilbert M'Millan, Huntingdon, Quebec, and owned by W. W. Skinner, Senneville, Quebec, has, in eleven lactations, produced 15,621 gallons at 4.12 per cent and 6452 lb. butter-fat. Nine of her records were made on two milkings a day. She is the world's Ayrshire butter-fat producer on a lifetime yield. Another cow that has done well is "Relief Lucy" of the Central Experimental Farm, Ottawa. For eleven lactations she has given an official yield of 13,472 gallons and 5120 lb. butter-fat, largely on twice-a-day milkings. Bred in Scotland by James Mackie of Relief, she is out of "Dalfibble Lucy 2nd" of straight Dalfibble breeding,

and was sired by "Netherhall Renown," who was by "Howie's Observer."

The greatest Show of Ayrshires in the world is held annually at the Canadian Royal Winter Fair, at which, in 1936, 218 Ayrshires were exhibited, of which 186 were Canadian-owned, the balance, 32, coming from the States.

Arrangements are being made for the establishment of a Preferential Class for bulls, based on the outstanding performance of their daughters, and in this Canada appears to be leading the Empire.



Fig 30 —*Canadian Ayrshire Cow, "Springburn Lovely Pet"*  
World's record Ayrshire lifetime butter fat yield

### *New Zealand.*

The first importations to New Zealand took place in 1848, when a bull called "Rob Roy" was imported with some cows. "Rob Roy" was useful in 'logging up.' Other importations followed in later years, but the first volume of the Herd Book was not published till 1910. Unfortunately the Ayrshire breeders of New Zealand, owing to a fancied risk of foot-and-mouth disease, were not allowed to import animals from Great Britain, and consequently looked to North America for fresh blood. It was rather hard that the only customers for the produce of their cows were not permitted to export

pedigree cattle to New Zealand. Recently several importations from North America included the blood of Hobsland, Thornhill, Ardgowan, and others.

At present the breed appears to be in a period of transition. The 'new coo' of the new Ayr Show and the Bledisloe Trophy is only now beginning properly to catch on. As recently as last December, however, Mr Montgomerie shipped five bulls and a heifer.

In the last Volume (XX.) of the New Zealand Herd Book is reported the yield of "Ardgowan Hazel," a four-year-old, who gave 1808 gallons and 708 lb butter-fat in 305 days. The name is significant, but the herd belongs to one of the leading breeders in New Zealand, Mr J. G. Donald of Featherstone.

It is probably not without significance that the best cheese manufactured in New Zealand comes from those parts of the South Island in which the Ayrshire breed is most concentrated. Here again the Ayrshire shows its adaptability to the more varied climate of the south of the South Island as compared to the more equable conditions farther north.

#### *Australia.*

Like New Zealand, the first importations to Australia occurred during last century; and, like New Zealand, the breed has been somewhat handicapped by not adjusting itself to changed conditions as rapidly as the breed in this country. The breed is represented in each of the States of the Commonwealth, including Tasmania, but is chiefly centred in Victoria, though the Denbigh herd, belonging to the M'Intosh brothers, is in New South Wales. From this herd animals have been exported to Kenya. An outstanding record is that of the cow "Victoria," which, at the age of twenty-two years, produced 542 lb. of butter-fat in 273 days. In 1935 the cow "Denbigh Lustre 11th" gave 1823 gallons at 4.7 per cent, 846 lb. butter-fat in 273 days. Cattle have also been exported to Singapore.

#### *Africa.*

The number of breeders in South Africa is not large, but within the last few years a lively interest has been taken in the breed. At the present moment the breed consists mainly of recently imported animals, many of them introduced by Mr Alexander Drysdale. The herds principally represented are Auchenbrain, Townhead, Netherhall, and Lessnessbeck. A good yield, appearing in the last issue (Volume III.) of the South African Herd Book, is that of Montague Simpson's "Meadow-

bank Sybil," which gave 1793 gallons at 3·84 per cent and 688 lb. butter-fat.

Southern Rhodesia is showing an increasing interest in the Ayrshire, and the breeders there are members of the Ayrshire Cattle Breeders' Society of South Africa.

In Kenya there is an increasing representation of the breed, and several pedigree herds of excellent quality are maintained. The environment militates somewhat against high records. All the same, some creditable records have been made. Records of around 1000 gallons are by no means rare, and Mr J. K. Watson's cow "Finlayston Quicken" has achieved 2054 gallons in eighteen months. Auchenbrain, Threave, and Lessnessock blood seem to predominate, and mention has already been made of the importation of Australian blood of the Denbigh herd. For many years Ayrshires have been used for grading up the native cows, and there are now numerous herds with several top crosses of Ayrshire blood that are practically indistinguishable from the pure breed. These herds supply bulls for the further grading of native cattle. The pedigree herds supply the high grade herds with bulls. The first Ayrshires were imported in 1905 for the Government farm. The breed is making very definite headway in this part of Africa.

### *Asia.*

For many years Ayrshires have been spasmodically exported to India, where they have chiefly been used in the grading up of native cows. In certain cases the policy has met with success, but it must be recognised that, unless the standard of management is radically altered, it is unlikely that any permanent achievement will be obtained by the use of European-bred bulls. Where the management is adequate, as in the case of the Army Dairy Farms, the Ayrshire has certainly proved to be one of the principal breeds to be considered. Two heifers were exported to Calcutta last January.

Pure-bred herds are maintained at Hong-Kong and at Shanghai, having been imported about ten years ago. These are not maintained as pedigree herds. Ayrshires have also been imported to Singapore, but they appear to have suffered the same fate as other breeds.

At one time there was exported a considerable number of Ayrshires from Scotland into Japan, principally through the late Mr Thomas Barr of Hobbsland. Others were imported from North America into China and Manchuria, as well as to Japan. There is uncertainty as to whether any of these have been maintained as pure herds or whether they have all been used in grading up the native cattle, which was the principal reason for their importation, and for which purpose the reports

received indicate that, particularly in the temperate regions, they were fully satisfactory.

### *Norway.*

A moment's reflection softens the surprise that some people express when they realise for the first time the important part played by the Ayrshire breed in North Europe. In Norway, Sweden, and Finland the land is not unlike that of Scotland, where, to use the expression of the American cattleman, a cow has to 'rustle' for a living.

In Norway no other breed of imported dairy cattle has been of such importance as the Ayrshire. The years 1855-60 saw the first arrival of which we have any record, when the Agricultural College at Ås brought a herd from Scotland. The yield and conformation of these animals was good, but unfortunately the herd had to be destroyed owing to an outbreak of tuberculosis, but not before many calves had been sold to farmers.

The breed has had its greatest influence through crosses with the native cattle. At the present time the Red Trondhjem cattle are nearly pure Ayrshire, though somewhat smaller than those of Scotland, and not so even in their conformation. For the most part they are self-coloured reds, and a few have white markings. It is somewhat of a dual-purpose breed, and is to be found chiefly in the country round Trondhjem, which is situated about the centre of the land on the fjord of that name.

In the far north, in latitude 69, just south of Tromsø, the breed called Målselvfæ is also of Ayrshire origin, having been created by the continued use of Ayrshire bulls upon the native cows. These animals are small, but excellent milkers, especially considering the land in which they thrive. Many of them are polled.

All over Østlandet, in the south-east, are to be found scattered herds of practically pure Ayrshires. These are now part of the Breed Association for Horned Lowland Cattle, which also cares for Shorthorns and Friesians. During the past fifteen years there have been importations of the Swedish Ayrshire, which also serve a dual-purpose function and are in great demand.

The above information, and the following figures, have been kindly supplied to me by Dr S. Berge, who assists my friend, Professor per Tuff, at the Agricultural College at Ås, to which the first Ayrshires went. The figures refer to herds in the south, which are either of practically pure Ayrshire origin or crossed with the Swedish Ayrshire. The herd averages vary from about 600 gallons (yields not corrected for age) to the



very creditable performance by that of thirty-four cows owned by E. C. Knudsen of 900 gallons at 4.21 per cent, 378 lb. butter-fat. In this herd one cow, "Ninnarås 2," gave, in the year 1934-35, 1315 gallons at 4.41 per cent and 580 lb. butter-fat.

### *Sweden.*

In Sweden the Ayrshire has literally stood the test of time and emerged with great credit. Towards the middle of the nineteenth century various importations of cattle were made from different countries, including, from Great Britain, the Shorthorn, Galloway, and Pembroke. Of these, the Shorthorns are important, for their progeny were used for crosses in the foundation of new breeds and types. In 1844 Ayrshires were imported to four of eight Government breeding centres that were then newly established. In the same year Ayrshires were imported privately, and one herd—Skarhult—established then is still in existence, and may perhaps claim to be the oldest Ayrshire herd in the world, though Auchenbrain must run it pretty close.<sup>1</sup> This herd made a subsequent importation in 1888, which was also extremely successful. These animals were of a distinct dairy type, rather dark in colour, with irregular white markings, long bodies, and low-set horns. Other importations were made throughout the century.

In 1899 the Swedish Ayrshire Breeders' Association was formed, and a few years thereafter imports from Scotland ceased. The chief reason for this appears to be due to the phenomenal success of the Ayrshire in crosses with the native cattle, and the fact that, as in Scotland, animals could be

<sup>1</sup> In this connection the writer has made inquiry concerning the oldest herds in Scotland. The Burnhouses herd was founded before 1800 with stock from Parker of Broomlands, by the great-grandfather of Mr James Howie, whose three sons are still living: James Howie of Muirside breeds on different lines, but William Howie, now of Ingliston, succeeded at Burnhouses and has still a few animals descended from the herd he received from his father: Mr John Howie, solicitor, Ayr, was Secretary of the Herd Book Society from 1900 to 1922. The Nethereraig herd is a very old one, and probably derives from that owned by Mrs Pollok-Morris at the Craig, Kilmarnock, whose manager was Michael Cochrane, the father of John Cochrane, who was manager of the herd at Auchans, Dundonald: when the latter died his eldest son, John, went to Strathglass, New York State, leaving Alexander to carry on the tradition in Scotland.

Robert Paton of Pisgah, Tarbolton, carries on a vesselled herd descended from that of Robert Paton of Trees, Ayr. In the herds of George and Robin Dunlop, of Craighloch and Chapelhill respectively, are some of the Auldtoun strain of their father, Robert Dunlop. The Dalgig herd, dispersed a few years ago, was descended from that of John Murray of Carston, founded early in the eighteen hundreds. The Ardgowan herd is definitely very old, but information cannot be traced before the founding of the Herd Book. The Auchenbrain herd dates to 1840, and has been continuously there, and thus runs Skarhult very close. Alexander Steele of Burnhead dispersed his herd in 1894, but his son took some of the blood with him, and this has been incorporated in the Friesian herd in Essex of Alexander Steele, senior.

admitted to the Herd Book with five top crosses of Ayrshire blood. Perhaps also the predominant type of Ayrshire in Scotland at that time was unsuited to Sweden. In any case, the breeders there evolved from the Ayrshire a type of cow differing somewhat from the parent breed, but excellently adapted for the country and the type of husbandry practised. The name 'Ayrshire' was retained till 1927.

Parallel to the development of this breed there emerged another red-and-white dairy breed from some of the bigger farms of Middle Sweden, based upon crosses of Shorthorns and Ayrshires on the native cattle. In particular, the blood



Fig 31 — *Swedish Red and White Cow (S R B), 725 "Hedda" (5)*

Average six lactations 1075 gallons at 4.55 per cent, 490 lb butter-fat

of an Ayrshire bull, "Hero," imported in 1881, has dominated this breed.

In 1927 the two breeds were amalgamated under the name 'Swedish Red-and-White Cattle,' and are now known throughout the land as the S.R.B. (Svensk Rod och vit Boskap). "In Sweden no other breed, native or imported, has played so important a rôle as the Ayrshire in the evolution of an improved dairy type. About two-thirds of all registered cattle are of the Red-and-White breed." So writes Dr Iver Johansson, Professor of Animal Breeding at the Agricultural College of Sweden, a man of world-wide experience in the breeding of dairy cattle. The following figures, which he sends me, are

of interest. To these he adds this note: "We have been so wise in Sweden that we pay very little attention to top figures for a single year and a single cow."

One cow, 394 "Aslög," a pure-bred Ayrshire, born in 1918, gave in her seventh lactation 2142 gallons at 4.04 per cent, 865 lb. butter-fat. Another cow, 725 "Hedda" (5), has averaged for six lactations 1075 gallons at 4.55 per cent, 490 lb. butter-fat. A third cow, the dam of the bull "Såtenas Hero" (most of the bulls are called "Hero," being directly descended from the Ayrshire bull), gave in five lactations an average of 1005 gallons at 4.52 per cent, 493 lb. butter-fat.



Fig 32.—*Swedish Red-and-White (S.R.B.) (Cows at Pasture.*

An examination of the photographs of the S.R.B. shows these cattle to be possessed of the old crummie horn and to be inclined to more of a dual-purpose type. Swedish breeders have definitely selected for longer teats and deeper udders than are usual in this country. The typical Ayrshire udder, low and long with short teats, is disliked in Sweden. They appear to have had more difficulty in fixing the desired type. To one interested in the story of breed development the work of the Swedish breeders is extremely interesting, for it illustrates the soundness of the foundation stock bred in Ayrshire a hundred years ago, and is a tribute to the work of the early breeders.

*Finland.*

The Ayrshire is the only foreign breed of importance in Finland, and is quite as important as the indigenous breeds. About 1847-48, 59 head of Ayrshires were imported, 33 in 1862, 40 in 1872-74, 90 in the next ten years, and another 226 before the end of the century. From 1900 to 1911 they went over at the rate of about 75 a year, with two smaller importations in 1913 and 1923. The Ayrshire Society was formed in 1901.

The more important animals are "Foulton Polonius," a son



Fig 33 — *Finland Ayrshire Cow, "Ophelia"*

First five lactations averaged 1456 gallons at 5.75 per cent

of "Foulton Rosina" (19,603); "Howie's Buttercup" (6485), a son of "Brown Polly of Monkland" (12,523); and, most impressive of all, "Auchenbrain Knight Errant" (19,671). These are all distinguished by their progeny. In particular, the influence of "Knight Errant" appears to have been quite exceptional and the modern breed is now built up on his blood.

As may be deduced from these names, the type of Ayrshire in Finland is very different from that in Norway and Sweden: indeed it is hardly to be distinguished from the Ayrshire as we know it. If anything, the horns seem somewhat stronger, but this may be due to environment. Otherwise, the photo-

graphs at any rate cannot be distinguished, the udders particularly being of the same type.

As in Sweden, stress is laid on lifetime rather than lactation yield. I am informed by the Secretary, V. A. Brotherus, that in the last annual report on the 14,000 officially recorded cows of this breed, the average production was 837 gallons at 4 per cent, and 337 lb. butter-fat. According to I. Paloheimo, there are many herds of over 100 head which average more than 890 gallons at 4 per cent. The maximum yield over a 360-day lactation is reported as 2840 gallons at 4 per cent and 1221 lb. butter-fat. This is, I think, the world's record



Fig. 34.—*Finland Ayrshire Cow, "Tossan."*

In fifth lactation gave 1263 gallons at 4 per cent.

fat yield for an Ayrshire cow. Another cow, "Ophelia," has five lactations ranging from 1100 to 1500 gallons, with a lowest butter-fat percentage of 5.1, and going up as high as 6.7.

In Denmark there are a few isolated herds of Ayrshire cattle, but there, let it be gladly acknowledged, the Friesian reigns supreme amongst the imported breeds, the land being more suitable for that breed than the Ayrshire, as is the case in the southern corners of Norway and Sweden.

### *Economic Production.*

Outstanding features of the methods adopted in Norway,

Sweden, and Finland are the emphasis laid on lifetime rather than lactation yields, and adequate standards for the proving of sires by the production of the daughters. But perhaps the most interesting of all are the records of food consumption in Sweden and Finland, and particularly in the latter. For instance, the Ayrshire Society in Finland makes a special list of those herds which attain a high average production with comparatively small amounts of fodder, but with ample grazing. For each herd is recorded the amount of fodder used (as oilcakes and other concentrates), the amount of hay, straw, and roots, and any liquid food. It certainly would appear as though Denmark were not the only country in North Europe from which Ayrshire breeders in this country may derive assistance in methods of improving their breeds.

There is perhaps no other breed of cattle that has so much to its credit as the Ayrshire has in providing foundation stock for new breeds. Granted that the Shorthorn is the breed *par excellence* for the grading up of stock, and for this purpose it has been more extensively used than any other, it has hardly contributed to the formation of other breeds, if we exclude the breeds in this country. It has, of course, the Illawarra to its credit, but for size this Australian breed cannot compare with those of Norway, Sweden, and Finland, though it has produced the world's highest yielder of butterfat. Likewise the Hereford and Friesian are more widely distributed than the Ayrshire, but they have not been employed as the foundation of new breeds. The position of the Ayrshire is unique.

And, curiously, the Ayrshire owes this largely to those early breeders who worked before the Herd Book era. Truly, Theophilus Paton, the father of the breed, built better than he knew. He must have been a most enterprising man, as well as a skilful breeder of cattle. Likewise, the others who saw the value of the Swinlees cattle, Parker of Broomlands, Reid of Auchengowan, Love of Threepwood, and Robertson of Hall, as well as others, such as the Drews, Campbell of Daljig, Young of Kilmaurs, Fergusson of Kilkerran, the Duke of Hamilton, Shaw Stewart of Ardgowan, Howie of Burnhouses, Martin of Auchendennan, Bartlemore of Lochwinnoch, Robert Montgomerie of Lessnessock, Scott of Netherhall, Keir of Buchlyvie, and the Dukes of Buccleuch and Atholl, as well as others.

With the scanty information now available, and the absence of a Herd Book in those days, it is not possible to assign exact values to the work of these early breeders, but undoubtedly Theophilus Paton stands out supreme as the father of the breed, whose work was carried on in different ways by Parker of Broomlands and the Drews. And so to the present century. . . .

*The Future.*

What then of the future of this breed? Breeders of the present day would do well to ponder on this question. Remarkable yields have been quoted both in Scotland and overseas. Not so many years ago a lactation yield of 600 gallons was considered remarkable. The highest recorded yield for an Ayrshire now shows a fivefold increase. All honour to those who have achieved this, for the existence of such animals can help to improve the others. But is this to become the standard of the breed?



Fig 35.—*Ayrshire Cow, "Auchenbravn Yellow Kate 12th" (54,219)*

Born 1915 In 14 lactations gave 140,210 lb milk and 5054 lb butter-fat  
Photograph at 14 years of age

The function of the Ayrshire is to be able to produce milk under adverse conditions, and not to produce it in such superabundance as to require a radical alteration of its husbandry. The Friesian already has achieved the position of the highest yielding breed of the world. There is room for both types, and little need for competition between them.

The second function is to produce the milk economically. This is governed by two factors: efficiency of food conversion and longevity of the cow. Both these points are fully appreciated in North Europe.

Expressed as 'efficiency of food conversion,' the idea is

perhaps new to breeders in Scotland, but actually it is as old as the breed itself. It is no rash prophecy that I make, that in the next fifty years of the history of the breed we will gradually hear more and more of this. Who knows but that the work at present being accomplished in Finland will be quoted as an example to the breeders in Scotland!

The other point, longevity of the cow, has come into considerable importance of recent years. In Scotland the Society has established the 100,000 club of cows giving a lifetime yield of 10,000 gallons at 4 per cent, or 4000 lb. butter-fat. There are already fifty-one cows on this list. A similar Honour Roll has been established in the United States, and the name of the hundredth cow has recently been added. Likewise in Canada, and, as we have seen, great emphasis is laid on this point in Norway, Sweden, and Finland.

Resolving this problem of the long-lived cow, we return to the vexed question of conformation. Science has shown that conformation is little guide as an indication of lactation yield. But who will deny that it is a guide to the 'expectation of life' of the cow? And so once again we return to the reconciliation of opposing views. It is her legs and her udder that have largely made the Ayrshire what she is. It is her legs and her udder that are going to make her what she will be in the future, plus her general constitution, and in particular the organisation of her digestive system.

A philosopher has said that "to know how to grow old is the master-work of wisdom." To know how to make our cows grow old gracefully is the task that awaits our master breeders of the present day, who have inherited a great foundation upon which to work. The autumn of the beautiful is beautiful. To an Ayrshire cattleman, can anything exceed the beauty of the old cow that has worn well through the years? And what breed can more justly boast of such cows than the Ayrshire?

We leave it at that, with, for the future—"Long Life to the Ayrshire Cow!"

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I wish to acknowledge the great assistance I have received in the preparation of this article from various breeders in Scotland, and particularly from Mr John Howie, who was for so long the Secretary of the Herd Book Society. The views expressed on the more recent history of the breed are my own, and I accept full responsibility for them. They are not exactly in accord with the views of all the breeders I have consulted, since the events related are too recent for those concerned in them to be in complete agreement with each other.

I have also to acknowledge the help and advice freely given by the Secretaries of the Overseas Societies and by breeders in various parts of the world.

## INSECT AND OTHER PESTS OF 1936.

By A. E. CAMERON, M.A., D.Sc., F.R.S.E.,  
Consulting Entomologist to the Society.

### THE HEATHER BEETLE (*Lochmæa suturalis*).

*Introduction.*—In view of the widespread concern that exists among Scottish moor-owners regarding the ravages of the Heather Beetle, it was suggested by the Publications Committee of the Society that I should devote part of the space in the 'Transactions' assigned to this year's article on "Insect Pests," to a review of the life-history, habits, and control of this particular pest. The substance of the remarks which follow is primarily based on personal observations of the beetle and its activities, both in the open and in the laboratory. As opportunity served, visits were made during 1936-37 to infested moors in Midlothian, Peeblesshire, and Lanarkshire. I have also personally consulted moor-owners and game-keepers, who are acquainted with the beetle and its work, and have canvassed the opinions of others by correspondence. Reference, too, has been made to the writings of previous authors, and their views are duly accredited in the text. In composing the article, I have been particularly impressed with the many existing misconceptions concerning the habits of the beetle and its depredations. I have come to realise, too, that our knowledge of its biology and control is comparatively meagre and that there is need for investigation of the whole problem in order to make good existing deficiencies.

*Classification.*—In the system of insect classification, the Heather Beetle ranges in the family Chrysomelidæ or leaf-eating beetles with many injurious pests, such as the Asparagus Beetle (*Crioceris asparagi*), the Mustard Beetle (*Phædon cochleariæ*), Turnip Flea Beetles (*Phyllotreta undulata*, *P. nemorum*), and the notorious Colorado Potato Beetle (*Leptinotarsa decemlineata*). The feeding habits of all are alike. Both the adult beetles and their grubs defoliate their respective food-plants, with the exception of certain flea beetles, the grubs of which feed on the roots.

*Periodicity of Outbreaks.*—Like Turnip Flea Beetles, and unlike the Colorado Potato Beetle, the attacks of which are

marked by their perennial regularity, the Heather Beetle is subject to periodic fluctuations, so that in the intervals between outbreaks it becomes almost inconspicuous. Whilst the precise reasons for this periodicity have not been investigated, one may conclude from the results of numerous studies of periodicity in other organisms that it is determined by variation of the several factors, biotic and physical, which compose the animal's environment; and here it should be emphasised that there is prime necessity for an intensive study of the limiting factors to which the Heather Beetle is



Fig. 36.—*Lochmaea suturalis*. Heather Beetle.  $\times 12$ .

By courtesy of 'The Times,' 1st October 1936.

exposed in Nature. Only as the result of such a study extending over a period of years may one hope to obtain a satisfactory solution of the vexed problem of Heather Beetle control. To achieve this aim it is essential that investigation should proceed in the intervals between, as well as during epidemics; for it is just as important to learn the reasons for the natural restriction of a pest's numbers as it is to find those for its abnormal periodic increase. Indeed, the two sets of reasons are complementary.

In Scotland, during the past three years, the Heather Beetle has earned the rather invidious distinction of having attracted greater attention than any other insect pest. Periodically,

since 1911, when it was one of the subjects of the Report of the Committee of Inquiry on Grouse Disease,<sup>1</sup> it has provided material for articles contributed to the daily press and sporting journals. By this means those interested in moor management have been apprised of the general facts of its life-history and habits, and their attention has been focussed upon an economic problem that concerns not only the landlord and his shooting tenants, but also the sheep farmer and the apiarist.

Judging from all accounts, the present visitation of the Heather Beetle assumed the proportions of an epidemic in 1934, when complaints regarding the devastation of heather first began to be circulated. In the intervening period a decided increase in the intensity of the epidemic was noted in several localities. Thus the recognised association of the beetle with stricken areas of heather readily laid it open to a renewal of the long-standing charge of responsibility for the depletion of the stock of grouse, reduction of available sheep grazing, and decrease of the honey-flow due to the diminution of heather blossom.

*Distribution of the Heather Beetle.*—The distribution of the Heather Beetle in Scotland extends from the Solway to the Pentland firths, and it occurs locally wherever its preferred food-plant, the ling (*Calluna vulgaris*), is found growing. So far as its injurious activities are concerned, however, the majority of the reports which have been received by me have had reference to moors of the south-western, western, and northern parts of the country. The beetle has also been recorded in the east from the Pentland Hills of Peeblesshire and Midlothian, and its presence on the Moorfoot Hills of these same two counties has been recently verified. It is also known to occur in other eastern and midland counties. In 'The Grouse in Health and Disease,' already quoted, it has been recorded from eleven Scottish counties, but this by no means represents the total extent of its distribution.

*Description of the Heather Beetle and its Immature Stages.*

*Adult.*—The beetle (Fig. 36) measures slightly less than  $\frac{1}{4}$  in. in length and is of an olive-brown colour. The head and body are black. The upper surface of the middle region of the body behind the head is ornamented with three quadrangular spots, varying from rusty-brown to black, which are sometimes confluent. The head, pronotum, and wing-covers are sculptured with rather coarse, closely opposed, small pits, so that the surface appears to be finely granulated.

*Egg.*—The egg is about  $\frac{1}{10}$  in. in diameter, round or roundish

<sup>1</sup> Leslie, A. S., and Shipley, A. E., 1911 'The Grouse in Health and Disease.' Report of the Committee of Inquiry on Grouse Disease, London

oval, and yellow or yellowish-brown in colour. <sup>1</sup> When magnified, the surface is seen to be covered with minute impressed hexagonal areas.

*Larva*.—On hatching, the grub (Fig. 37) measures  $\frac{1}{2}$  in. in length, and, according to Grimshaw,<sup>1</sup> is a pale greenish translucent colour. In its growth to maturity it is said by Betrem<sup>2</sup> to shed its skin twice, rarely three times. When full grown, it measures extended, about  $\frac{1}{4}$  in. in length. Usually it is more or less curved, rolling itself up when disturbed. After each moult the larva is uniformly yellowish-white, except the head, which is dark. Gradually the colour deepens to a greyish-brown. Apart from differences in size,

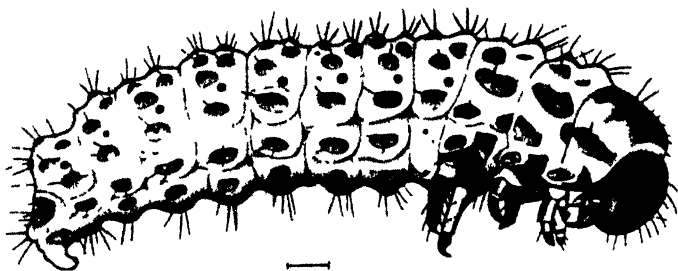


Fig. 37.—*Larva of Lochmusa suturalis*. *Heather Beetle*.  $\times 13$ .

After Leslie and Shipley, 'The Grouse in Health and Disease,' Vol. I, 1911.

the various larval stages do not differ markedly from each other in structure. The surface of the body is armed with dark coloured plates of variable size, separated from each other by the more delicate, pale integument. In shape the larva is convex above and flat below.

The head is less broad than the body and is provided with a pair of stout jaws bearing four or five large teeth. On each side there is a small eye-spot with a prominent spherical lens, beneath which there is attached a very short antenna consisting of but one segment.

The body terminates in a short stumpy process, the so-called anal pro-leg, which functions as a suctorial disc, serving to attach the larva securely to the shoots of its food-plant whilst feeding. In its movements it resembles a caterpillar.

<sup>1</sup> Grimshaw, P. H., 1913. "The Heather Beetle." *The Field*, July 1913.

<sup>2</sup> Betrem, J. G., 1929. "De Heidekever en zijn Biologie (Der Heidekrautblattkafer)." *Tijdschrift over Plantenziekten*, 35e Jaargang, afl. 6.

The body contracts in its length and therewith becomes arched. The hind end is next drawn forward and the suctorial disc attached. With the anterior displacement of the walking legs, the body is then stretched forward, the legs attached, and the whole series of movements repeated in the animal's forward progress. The legs are short and consist of three jointed parts, the last of which ends in an unpaired claw. Breathing pores (spiracles) are present, a pair on the second body segment (mesothorax), and a pair of smaller ones on each of segments 4 to 11.



Fig. 38 —*Pupa of Lochmaea suturalis. Heather Beetle*  $\times 13$ .

After Leslie and Shipley, *loc. cit*

*Pupa*.—This stage (Fig. 38) is pale yellowish-white, with parts of the adult, such as the legs, antennæ, and wings, readily discernible although closely applied to the body.

*Life-history. Hibernation*.—There is each year only one generation of Heather Beetles, which is explained by the occurrence in the adult of what is termed a *diapause*, consisting of an arrest of the development of the reproductive organs, and later associated with cessation of bodily movement during the winter months. Therefore, of the various stages composing the life-history, egg, larva, pupa, and adult, the last enjoys the greatest longevity. It extends to nine or ten months, of which the period October to March is passed in a state of suspended animation in or on the peaty soil at

the roots of the heather. The regularity of the annual occurrence of a diapause (arrest of reproduction) in the Heather Beetle implies that it is obligatory and inherited, the more so since it is assumed at a season of the year, August to October, when external conditions might be considered as favourable to the continuance of reproductive as they are of feeding activities. The mere condition of immobility of the beetle in winter does not itself constitute a diapause, but is merely the consequence of such a decrease of environmental temperature as to render the insect torpid. Dormancy usually begins in October or November, when the beetle abandons the shoots of its food-plant and enters the peat below. Reproduction does not commence until the following May or June.

So far as winter immobility is concerned, it must be emphasised that dormant Heather Beetles taken from the soil outside and introduced into the laboratory at any time during the period November to March can be stimulated to activity of movement and feeding, if they are exposed to favourable conditions of temperature—*e.g.*, 60° F. Assumption of reproductive activity does not, however, occur until a definite period of submission to low temperatures has elapsed. It is probable, too, that, as with locusts, the swarming flights of the beetles in spring, when they emerge from hibernation, results in an acceleration of development of the reproductive organs, caused by an increase of expenditure of energy and rise in body temperature. This, however, is a matter which requires confirmation by further investigation. During the period of diapause the application of physical stimuli, such as extremes of heat or cold, short of those which cause death, are usually ineffectual in producing its interruption. In contrast to the arrest of reproductive activity of the adult, a diapause involving merely arrest of growth may occur during one or other of the stages of an insect's life-history. A good example of a *larval* diapause is that of the Codlin Moth, a common pest of the apple. The caterpillar bores its way out of the young apple in midsummer, crawls under a loose piece of bark and spins a cocoon, there to remain dormant until the following spring. *Egg* diapauses are found to occur in the Wheat Bulb Fly and in many species of grasshoppers of temperate climates; *pupal* diapauses are common in the life-histories of many species of flies, such as the Cabbage Root Maggot Fly and the Mangold Fly.

In the laboratory, specimens of the Heather Beetle were maintained in glass jars and provided with sprigs of heather stuck in peat litter. When exposed to temperatures of 40° F. and below, the beetles crawled down the shoots into the litter and became dormant. When re-exposed to temperatures of 60° F. to 65° F. they were reactivated, ascended the shoots, and

resumed feeding. This explains the intermittent occurrence of the beetle on the heather out-of-doors during October and November. On warm sunny days during these months they may be found on the shoots and collected with a sweep-net. On intervening colder days few or no specimens may be encountered, since a marked drop of temperature drives the beetles to the ground. In the open, persistent soil temperatures of 40° F. and lower induce the continuance of dormancy until March or April of the following year, when an increase to 50° F. and above serves to stimulate the beetle, which straightway emerges from the soil to resume an active existence above ground.

On 11th December 1936 I examined a moor in Peeblesshire, in which a damp area of fifty acres of heather had been stripped of foliage by the larvæ of the Heather Beetle the previous summer and was showing fox-red. Although cold weather had prevailed for several days, during which the air temperature had fallen as low as 19° F., adult beetles were discovered on the surface of the soil when the overlying sphagnum was removed. They were found to be more numerous among healthy heather, to which they had probably migrated the previous autumn from the adjacent area damaged by the grubs. On 23rd December I experienced no difficulty in collecting fifty specimens in half an hour on a few square feet of soil.

*Susceptibility of Hibernating Beetles to Low Temperatures.*—A series of experiments was made to test the resistance of hibernating Heather Beetles to low temperatures. The specimens submitted to test were collected under sphagnum moss in the field on 23rd December 1936 at a time when the soil surface temperature was 32° F. The beetles had then been in hibernation at least two months and were thoroughly dormant when uncovered, but soon revived when exposed to the warmth of the hand. Until such time as they were required for experiment, they were kept in peat moss in open jars out-of-doors. In the process of experiment the beetles were enclosed in a small glass bottle, the bottom of which was covered with moist filter paper, and were subjected to temperatures ranging from 19° F. to 0° F. for periods varying from three to twenty-four hours or longer. A temperature of 10° F. for twenty-four hours proved lethal to the beetle. At lower temperatures death followed exposure more rapidly. For example, death occurred in three hours at 6° F. Temperatures between 19° F. and 10° F. were fatal only after prolonged exposure. In one experiment at 14° F. the beetles survived an exposure of twenty-four hours, whilst in another, at the same temperature, they failed to revive after a period of refrigeration of forty-eight hours. There was, however,



considerable individual variability in the degree of resistance displayed by the beetles to the same and different low temperatures. As an illustration one experiment may be cited where, contrary to expectation, one-third of the specimens were found to have survived refrigeration of 13° F. for seven days. Beetles kept in the laboratory for several days at 60° F. previous to submission to low temperatures proved more sensitive to the effects of cold than those taken directly from hibernation. At 19° F. they succumbed in twenty-four hours, whereas hibernating individuals readily survived exposure of the same duration at temperatures of 19° F. to 14° F.

As a result of the foregoing experiments it may be concluded that once the Heather Beetle in Nature has committed itself to hibernation, it becomes conditioned to such temperatures as normally occur during the average British winter. Under a cover of sphagnum and snow the dormant beetle is amply protected against the vicissitudes of even a hard winter. It is likely, however, to be less resistant to unseasonable spring frosts after it has emerged from its state of winter dormancy, since, with the resumption of its aerial activities and feeding, it surrenders in part its capacity to withstand excessive cold.

*Migration.*—On warm sunny days in April the Heather Beetle, assisted by prevailing winds, frequently undertakes migratory or swarming flights, the cause of which is not well understood. It may be that they are merely an expression of intense metabolic activity preceding the maturation of the ovaries and oviposition, and stimulated by the warm rays of the sun affecting all individuals simultaneously. That they cannot well be due to food shortage is shown by the fact that the beetles frequently take wing from moors where succulent green heather is abundant and settle in places where food is scarce or entirely lacking. Whereas the ultimate end of such swarming flights would be an extension of the local distribution of the beetle, this result is frequently nullified by the fortuitous nature and indeterminate course of the migrations. Coastward flights have been observed to terminate on foreshores, where the absence of heather must have resulted in the starvation of the migrant beetles. Again, there are records of their having been wafted out to sea or upon the waters of inland lochs, there to perish prematurely by drowning or as a prey to trout. Such an occurrence was noted by one of my correspondents, Lieut.-Colonel T. W. S. Graham, in May 1936, first at Loch Ruskie, Perthshire, and later (11th May) at Loch Awe, Argyllshire, where the shores were literally swarming with the beetle, and the surface of the water was covered with their struggling bodies. Not only were the trout observed to be greedily devouring the beetles, but every

fish that was caught was gorged with the insects. Needless to say, fishing under these circumstances was not very successful. At mid-day on 11th May the air-temperature was 66° F., whilst that of the water was 55° F. Two days later (13th May) Lieut.-Colonel Graham again visited Loch Awe, but observed no trace of the beetle. On this occasion fishing was attended by greatly improved results.

In 1936 I was advised of three cases of swarming flights of the Heather Beetle. One of these was observed by a sheep farmer in Wigtownshire on 8th April. In the words of my correspondent, "the beetles were found adhering to clothes drying on the line. They were flying and swarming all around." Similar flights were observed by gamekeepers on a moor in Ayrshire during the first week of May, where they were said to be "as thick as flies round about their houses and clinging to everything." The houses were situated a few hundred yards from the outskirts of the nearest moor. Another report stated that the beetles swarmed round a house a mile distant from the nearest moor. Migratory flights have also been frequently noted by observers in Holland and Germany, and have been cited by Betrem already quoted (p. 114).

*Relation of Beetle to the Grouse.*—In the interval between their emergence from hibernation in the spring and the commencement of egg-laying, the beetles are engaged feeding on the terminal buds and tender leaves of the young shoots that form the staple diet of the grouse from May through the summer, replacing the less nutritious reddish-brown heather of the winter months. It will thus be readily appreciated that the Heather Beetle on severely infested moors offers serious competition to the grouse and may be indirectly instrumental in dispossessing the latter of its territory. Grouse show no more desire to feed on fox-red heather blighted by the beetle than they do on that killed by frost; neither, unfortunately, do they feed on the beetle.

*Pairing and Oviposition.*—The pairing of the beetles occurs during the period of spring and early summer feeding, called 'maturation feeding' by German authors. Egg-laying begins in May and is continued through June. The eggs are laid singly among sphagnum moss, where they were first found by Grimshaw (*loc. cit.*) in 1913. The period of incubation is about three weeks. The reproductive capacity or number of eggs laid per female is not known. Certain closely related leaf-eating beetles lay 300 to 400 eggs. It is stated that the beetles may continue feeding and egg-laying during the summer months, some of them so late that they are still active when the beetles of the next generation appear in September. This fact requires verification.

*Development.*—Immediately on hatching, the minute grub attacks the tender leaves of young shoots. In the laboratory, according to Betrem (*loc. cit.*), it sheds its skin twice, rarely three times, at intervals of about six days. During the third stage the grub stops feeding after about seven days, when it descends to the ground, into which it burrows and makes an earthen cell with smooth inner walls just beneath the surface. Nine to ten days later the grub moults and transforms to a pupa, which completes its development in sixteen to seventeen days to change to the adult. Thus, according to Betrem, the period of development from egg to adult in the laboratory was eight to nine weeks. By contrast this same period out-of-doors is prolonged to three or four months. The grubs become full grown in August, and the adult beetles appear towards the end of September. They may continue intermittently active until the first or second week of November, being found on the heather during warm sunny days and in the sphagnum or soil on cold dull days. On 8th November 1936 I had sent to me living specimens of the beetle from Bonar Bridge, Ross-shire, where they had been collected on heather. On 7th October of the same year I collected fifty specimens on heather in Lanarkshire. Both the Ross-shire and Lanarkshire moors from which the beetles were obtained were said to have been heavily infested. Certainly there was much withered heather on the latter, as I was able to verify by actual examination.

*Damaged Heather. Damage Differentiated.*—During an epidemic of Heather Beetle it is not unusual to attribute to the pest all and sundry damage to which heather may be subject. Even in the short time that I have been able to devote to the matter, I have come to realise the existence of certain fallacies that have arisen by the incorrect association of two or more kinds of properly observed natural occurrences in the relationship of cause and effect. On a moor the casual observer may discern small or large areas of withered heather and likewise the presence of numerous Heather Beetles. So far, his observations may be quite correct, but hasty jumping at conclusions may lead him to make wrong deductions. Unless the beetle has been actually observed to cause such intensive damage as to defoliate attacked heather entirely, it is not always safe to venture an opinion as to the ultimate cause of death, especially since there is doubt as to whether the Heather Beetle kills the host-plant outright. One of my correspondents, who has had long and intimate experience of moor management, recently expressed himself in a letter to me as follows: "While some people maintain that severe infestation kills heather, I have never been able to find such cases, and wherever the heather has been attacked it has,

within two or three years, come away again from the roots quite well."

From the foregoing it will be readily understood how essential it is to recognise and differentiate not only the various kinds of withered heather, but the stages through which the heather passes in the process of withering. Only then can a competent opinion be offered regarding the cause of death in particular cases. Here I have in mind the question of advising landowners and gamekeepers who have from time to time sent me samples of withered heather for examination and comment as to the cause of death. Frequently the samples have been accompanied by the statement that it is the conviction of the sender that the heather was killed by the Heather Beetle, although the insect may have been neither identified nor observed in the locality from which the heather was forwarded.

Whilst the Heather Beetle has undoubtedly been responsible for much damage during the progress of the current epidemic, it is likewise certain that much that passes for beetle damage proceeds from other causes. On practically any moor the following kinds of abnormal heather can usually be recognised :—

1. *Fox-red*, in which the colour-change is produced by the death of young shoots killed by a late black frost in spring or early summer. The affected leaves turn red, shrivel, and finally drop off. A somewhat similar 'frosted' appearance (Fig. 39) is caused by the attacks of adult Heather Beetles in the spring, and their grubs in July and August. In the latter case shreds of the attacked leaves remain adherent to the shoot, and only those leaves are killed that are actually attacked. The uninjured leaves may remain green for a time, unless the bark is also attacked, when all the leaves of a shoot may die. Stems of young shoots entirely stripped of leaves are very characteristic of beetle injury.
2. *Brown or Silver-grey*.—This colour-change is frequently observed in heather of ten to fifteen years, which has grown rank and scrubby, and is commonly called 'stick-heather.' Such heather may have died as a result of exhaustion through weathering. The fact that it stands high and open in growth renders its foliage susceptible to injury by frost and cold winds in winter, when the closer canopy of short, close heather serves to protect the green shoots below. Incidentally, stick-heather is valueless in providing food for grouse, and should be eliminated.

Several samples of stick-heather have been submitted to me by gamekeepers, who believed that the

withering was due to the Heather Beetle. Observation, however, shows that the leaves remain intact on such heather for a long time after death, so that it is readily recognisable from heather stripped by the beetle.

3. *Reddish-brown or purplish*.—The colour of such heather is due to certain chemical changes that occur in the cell-contents of the leaves with the onset of winter

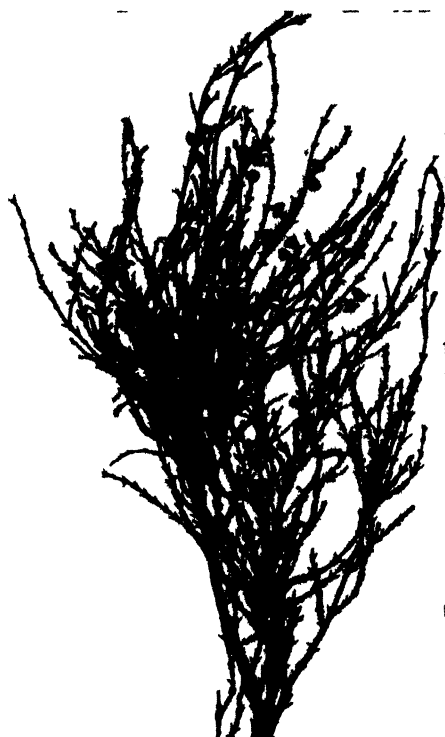


Fig 39 —*Heather damaged by the Heather Beetle.*

From nature. Reduced to  $\frac{1}{2}$ . The specimen shows the twigs stripped of foliage.

conditions. Frequently the shoots of only one side of a plant may be affected, those of the other side retaining their dark-green colour. It is known as 'winter' heather and is the resting stage of the plant, dry and sapless, whereby it is rendered resistant or immune to frost. Nevertheless it is alive and healthy. It is valuable in that it forms an important part of the diet of the grouse in the spring (April).

Needless to say, the Heather Beetle has nothing to

do with the change of colour exhibited by 'winter' heather, although there would appear to have been some uncertainty regarding this question in the minds of a few of my correspondents.

Wherever doubt prevails concerning injury caused by the beetle, a positive diagnosis is assisted by the discovery of the pest in one or other of its stages, preferably the adult or the grub. The beetles are readily recoverable from the heather by the aid of a sweep-net during spring and summer, and the grubs likewise during July and August. From October or November to April, one must rely on examination of soil samples taken from the roots of heather suspected of having been damaged the previous season. Such samples need not be larger than one foot square, and, since the beetles hibernate near the surface, not more than two or three inches deep. A ready method of extracting the beetles is that described by Grimshaw in 'The Grouse in Health and Disease' (pp. 417-418), whereby the samples are immersed in water. In due course any beetles present reveal themselves by floating to the surface. The beetles can also be readily uncovered on an infested moor during the winter by removing the surface vegetation.

*Extent of Damage and Association with Breeding Places.*—A significant feature of Heather Beetle damage is its lack of uniformity. An infested moor is usually affected only in patches, which may vary in size from a few square yards to several acres. A similar disparity of the degree of damage, but on a larger scale, may even occur on contiguous moors. Whilst one may be severely attacked, considering the moor as a whole, the other may be almost free of injury. Such differences can, however, be adequately explained on the basis of a selective discrimination displayed by the beetle in choosing its places of breeding. It is recognised that the beetle has a marked predilection for damp ground carpeted with moss beneath the heather for the laying of its eggs. Thus it is that an ill-drained moor or part of a moor is more susceptible to attack than a dry one. It is, therefore, natural to expect that the beetle will increase under conditions where sphagnum flourishes. Consequently, such wet areas would form foci from which an infestation would spread. So convinced was Grimshaw (*loc. cit.*) of the association of the beetle with areas overgrown with sphagnum that he strongly advocated drainage—important from other considerations of moor hygiene—as the means whereby the beetle could be most satisfactorily controlled.

Several authors have referred to 'scorched' as if it were

distinct from 'frosted' heather. Others again, in describing injury caused by frost, refer to the condition as 'scorched,' using the words 'frosted' and 'scorched' interchangeably in application to the latter kind of injury. Like any other plant, heather is liable to the adverse effects of prolonged summer droughts, drying winds, and the warm rays of the sun, but rarely is the damage so intensive that the plant fails to recover with the return of normal conditions. The important consideration is not so much the distinction of these two kinds of injury from each other, but the differentiation of either from that due to the Heather Beetle. It should be no more possible, for the reasons stated above (pp. 121-122), to confuse injury due to the scorching rays of the sun than to mistake the latter for damage caused by frost. In this regard it is well to remember that whereas both the ling and bell heather are susceptible to the blighting effects of frost and drought, only the former is subject to attack by the Heather Beetle.

In the roots of heather there lives a *symbiotic* fungus which probably assists the plant in obtaining its supply of nitrogen. So far as *pathogenic* fungi are concerned, the question of the susceptibility of heather to their attack has not been investigated. It is interesting to learn that Betrem (*loc. cit.*) in Holland found two localities where both ling and bell heather had become blighted by an agency that apparently did not involve the Heather Beetle. Examination revealed a species of *Corticium* on both kinds of heather, whilst the stems of the bell heather were here and there found to be white with fungus hyphae. It should again be noted in this regard that the Heather Beetle does not attack bell heather.

*Control.*—In coping with the Heather Beetle, moor-owners are confronted with two important considerations: (1) the difficulty of applying to large areas of infested heather treatment that will neither affect adversely the stock of grouse of a moor nor depreciate its grazing value; (2) the problem of restricting the cost of treatment to a figure that the productive capacity of the moor can well bear. Any campaign of control that does not recognise the necessity for co-operation among moor-owners is likely to be seriously handicapped from the outset. The Heather Beetle recognises no boundaries, material or otherwise, separating one moor from another, provided conditions are suitable for its breeding. As has been already remarked (p. 118), the swarming flights of spring and early summer serve to extend its distribution over wide areas of the same or adjoining moors.

The several methods that are employed in the control of insect pests are conveniently classified into three groups as

follows: (1) *direct*, which seek to destroy the insect by the application of poisonous substances or by mechanical means; (2) *indirect*, which aim to render conditions unsuitable to the insect and improve those of the host-plant; (3) *biological*, which employ enemies and diseases of pests.

I. *Direct*. (1) *Insecticides*.—The application of such toxic substances as arsenical compounds to heather for the control of the beetle are at once ruled out of consideration, because of the risk of poisoning both grouse and sheep. Tests, however, should be made of the efficacy of such less dangerous insecticides as pyrethrum and derris, which are non-toxic both to birds and mammals. In the use of the latter, precautions must be taken that the areas selected for treatment are not ones that drain rapidly into trout streams or lochs, since derris is a powerful fish poison. Even if derris should be shown to be effective as an agent of control, its cost may well be prohibitive. According to Dr Guy Morrison, Advisory Entomologist, North of Scotland College of Agriculture, who has devoted much time to the study of the Heather Beetle, this would amount to £2 per acre for the material, apart from the cost of labour for its application. It should be emphasised that direct methods of control involving the use of poisons are likely to be attended with a greater measure of success if applied to the less active grubs in July and August than against the adult beetle.

(2) *Burning*.—According to statute heather-burning in Scotland is restricted to the period 1st October to 15th April. With the exception of two or three weeks at the end of this period, the Heather Beetle is in hibernation in the soil, but not, in my opinion, sufficiently deep as to be out of reach of a surface fire. Since the beetles hibernate near the surface of the soil among heather on which their grubs have previously fed, or in the immediate vicinity, a suitable day in mid-winter should be chosen on which to burn the affected areas. The vegetation should be so dry that it would readily catch fire and burn quickly, producing heat of such intensity as would destroy the dormant beetles before they could burrow beyond range of the heat or otherwise escape.

Burning that is delayed until the end of the statutory period, when the beetles may have emerged from hibernation, would be likely to fail of its purpose. Only a very small percentage of the now active beetles would be likely to be destroyed, since their natural reaction would be to resort to flight as soon as the rising temperatures accompanying the fire became intolerable. Again, their dispersal by migration would necessitate the burning of extensive areas of healthy heather, the loss of which would not be justified by the results.

The practice of burning is, of course, recommended on



grounds other than those of Heather Beetle control. A well-managed rotational system demands that at least one-tenth part of a moor should be burned each year. By this means old withered heather and, incidentally, that destroyed by the beetle is eliminated. Their place is ultimately taken by fresh green shoots sprouting from the roots of the burnt plants in the natural process of regeneration. Burning may thus be an indirect factor of considerable importance in controlling the Heather Beetle, so changing the vegetational conditions as to render them locally unsuitable to the insect. It is my opinion, based on observation, that moors on which a rigid system of rotational burning is practised are less liable to infestation than those which are less strictly husbanded.

Burning of heather in July and August, when the grubs are exposed on the foliage, is theoretically sound but difficult in practice. Apart from the fact that burning in summer is not permissible under the law, heather in a green sappy condition is not readily set on fire unless previously treated with a highly combustible material such as petrol or paraffin.

II. *Indirect. Drainage.*—From what has been said regarding the favoured breeding sites of the beetle, it is evident that the ground water-level of very damp places should be lowered by drainage in order to discourage the growth of sphagnum. Once drains have been established care should be taken to maintain them in good functional order. Choked drains merely serve to aggravate the conditions which their construction was intended to eliminate. It is well to recognise that the expense of cutting and maintaining drains should be considered not as a sole charge to the account of Heather Beetle control, but as a part of the cost of moor management undertaken to encourage and improve the growth of sound, vigorous heather.

III. *Biological.* (1) *Parasites.*—In the absence of any record of the occurrence in Nature of insect parasites of the Heather Beetle, no useful purpose could be served by enlarging upon the utilisation of a hypothetical factor in controlling the pest. My excuse for referring to the subject here requires no apology since it has been suggested by a member of the Society that an insect parasite might be found that could be used to control the Heather Beetle. Such an ideal would be most desirable. While no one can gainsay the importance of insect parasites as natural agents of control, experience has shown that indigenous species have rarely proved of value in stemming epidemics of their hosts. Nevertheless, the whole question of parasitism in reference to the Heather Beetle requires investigation, and it is proposed to submit it to careful examination.

(2) *Predators.*—In Holland, Betrem (*loc. cit.*) observed that

the grubs of the Heather Beetle were attacked by the adults and larvæ of the Ladybird Beetle, *Coccinella hieroglyphica*, which he considered to be its principal insect enemy. Of other predaceous insects, the relationship of which to the Heather Beetle was quite uncertain, he recorded the Shield Bug, *Asopus* (*Rhacognathus*) *punctatus*, and three species of Assassin Bugs—viz., *Coranus subapterus*, *Nabis apterus*, and *Nabis rugosus*, var. *ericetorum*. All of these species are British, and it would be interesting to discover whether they prey upon the Heather Beetle in Britain.

(3) *Fungi*.—A saprophytic fungus *Sporotrichum epigæum* was found by Betrem attacking the larvæ of the Heather Beetle in their earthen cocoons. It was not stated whether the invasion of the fungus occurred before or after the death of infested larvæ.

(4) *Birds*.—Partridge, pheasant, black game, and starlings devour the Heather Beetle in large quantities when the opportunity presents itself. The contents of the crops of four partridges shot on the Pentland Hills on 8th November 1935 were examined by Mr A. R. Waterston.<sup>1</sup> In one crop there were 933 beetles, and the three remaining crops contained 2000 beetles. The crop of a grouse shot on the same day contained numerous shoots of heather and blaeberry, but no insects. The pheasant appears to be just as fond of a Heather Beetle diet as is the partridge. I have a record of a cock pheasant from Ayrshire, shot late in the season of 1934, that contained hundreds of the beetle in its crop. Berry<sup>2</sup> reported on the contents of a crop of a cock pheasant from Argyllshire, in which there were 508 beetles in addition to 2286 specimens of a fly, *Bibio lepidus*, 6 ants, and 9 grasshoppers. He strongly urged that the pheasant and black game should be protected. So far as the latter is concerned, Professor (now Sir) E. B. Poulton<sup>3</sup> examined the crops of five black game, each of which was gorged with Heather Beetles. It was computed that black game devoured about 300 beetles per bird per day.

From the brief evidence presented, there would appear to be good reason for the encouragement of partridge, pheasant, and black game as natural agents of control of Heather Beetle. On the other hand, because of their habits, it is doubtful whether any of these birds is likely to prove very effective in reducing the Heather Beetle population at times of epidemics. The partridge, as is well known, prefers cultivated land to the open heather moor, and the pheasant and black game choose plantations adjoining the moor or cultivated

<sup>1</sup> Waterston, A. R., 1936. "Partridge versus Heather Beetle." The Scottish Naturalist, No. 217.

<sup>2</sup> Berry, W., 1917. "A Chair of Economic Ornithology." The Scottish Naturalist, No. 66.

<sup>3</sup> Poulton, E. B., 1907. "Insects and other Foods of Black-game." Proc. Ent. Soc. Lond., pp. lxxxiii.-lxxxv.

land. This restriction of habitat makes it impossible for them to cope effectively with the immense numbers of Heather Beetles distributed over open moor and hill, which these birds rarely frequent. Whilst the partridge, pheasant, and black game are strongly insectivorous, they include also in their diet an abundance of vegetable matter, such as grain and roots, for which they are frequently condemned; and the black game is especially suspect of the forester because of the damage it does to the buds and leaves of young coniferous trees. So far as the starling is concerned, its status relative to the Heather Beetle has not been determined. Although large flocks have been observed to settle on infested moors and apparently devour the beetle, the question of their usefulness, as judged by examination of their crop-contents, has not been decided.

#### THE HEATHER WEEVIL (*Strophosomus lateralis*).

The Heather Weevil (Fig. 40) is about  $\frac{3}{8}$  in. long and shiny black. Its upper surface is coarsely pitted and a broad band of silvery iridescent scales runs along either side. In the middle of the upper surface at the base of the wing-covers there is a small patch of similar scales.

On moors extending from the New Forest to the north of Scotland the Heather Weevil is commonly found on both ling and bell heather. So far as I am aware, its life-history has not been studied and very little is known of its habits. Its association with heather has suggested to some that it may be partly responsible for injury to the latter. In the absence of any exact information concerning the habits of the weevil, it is impossible either to guess, far less assess, the amount of such injury. Presumably the grubs feed on the roots of the heather, and it is significant that specimens of dead heather submitted by various correspondents bore signs of having been destroyed by a root-feeding grub. Further comment is, however, useless, until such time as investigation will reveal the precise status of the Heather Weevil in the economy of the moorland. Meanwhile, it is interesting to learn that the Heather Weevil has not been reported as occurring in epidemic proportions. At the same time it must be remarked that negative evidence is not necessarily significant, for it is possible that outbreaks of a comparatively inconspicuous insect as the Heather Weevil may have been overlooked.

As a result of the few observations which I have been able to make, I have learned that the Heather Weevil, like the Heather Beetle, hibernates in the soil as an adult. On 23rd December 1936 I collected several specimens of both insects

on the surface of the soil of a Peeblesshire moor. The weevils were observed to bestir themselves almost as soon as the vegetative cover was removed, despite the fact that the soil-temperature was verging on freezing-point. Their response to exposure, expressed in creeping, was more ready than that of

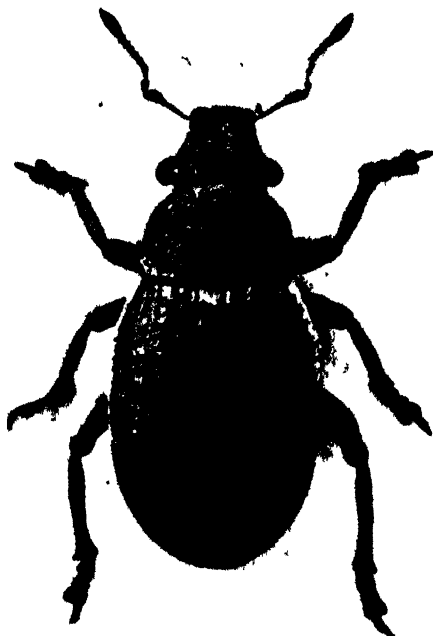


Fig. 40.—*Strophosomus lateralis*. *Heather Weevil*.  $\times 12$ .

From nature. Photograph by J. W. M'Hardy.

the Heather Beetle found under identical conditions at the same time and place. It would appear from this observation that the temperature required to immobilise the Heather Weevil is slightly lower than that which incapacitates the Heather Beetle. Laboratory experiments have shown that both species can withstand freezing ( $32^{\circ}$  F.) for an indefinite period without any injurious effect.

PARASITES OF THE RED DEER (*Cervus elaphus*).

In 1931-32 an opportunity was presented of investigating the insect and tick parasites of the red deer in a Scottish deer-forest. Five different species were discovered, of which two, the Warble Fly and the Nasal Bot Fly, undergo their larval development, the one beneath the hide, the other in the nostrils and throat of the host. The remaining three are external parasites—namely, the Castor Bean, Sheep or Deer Tick, the Deer Ked and Biting Louse, of which the first two are blood-sucking in habit, the last feeding on the scurf-skin and hair. All are specific to the deer with the exception of the Castor Bean Tick, which is associated with a veritable cavalcade of wild and domesticated animals. In this regard, deer which share the hill grazings of sheep must be considered as important auxiliaries in maintaining the ground population of ticks, the source of infestation of sundry passing hosts, including the sheep and the deer itself.

1. THE DEER WARBLE FLY (*Hypoderma diana*).

The statement is frequently made that red deer act as natural reservoirs of the warble flies (*Hypoderma lineatum* and *H. bovis*) of cattle. It is well known that the red deer is parasitised by a warble fly (*Hypoderma diana*), the habits and life-history of which are similar to those of cattle. From the close relationship of the three flies, suspicion has naturally arisen that there might be an interchange of their hosts. In the course of investigation I examined a large number of warble grubs from the hides of infested animals and compared them carefully with those taken from cattle. As a result of the evidence thus collected, it was concluded that the warble fly of the deer is specific to the latter, and that the cattle warble flies do not infest the deer.

*Life-history. The Adult Fly.*—The Deer Warble Fly (Fig. 41) measures about half an inch in length, black in colour, and uniformly invested with tawny hair. It is less robust and more slender than either *H. bovis* or *H. lineatum*, but agrees with the latter in the possession of four polished black longitudinal stripes on the upper surface of the thorax, which are, however, narrower and less distinct. The parti-coloured transverse bands of black and yellow hair of *H. bovis*, or black, white, and orange of *H. lineatum* are absent in *H. diana*. The body of the female fly terminates in a tubular ovipositor consisting of four telescoping sections, whilst the end of the male body is evenly rounded. The two sexes are further

distinguishable by the larger eyes of the male, which are more closely approximated than are the smaller ones of the female. As in all warble flies, the mouth-parts are reduced to functionless vestiges.

The season of greatest adult activity is May and June, the largest numbers appearing in the latter month, when the flies may occasionally be found frequenting damp spots on paths traversing deer-forests. Their fondness for bare roads and foot-tracks is shared by *H. lineatum*, of which about two dozen males resting on a hill-path were taken by Mr H.

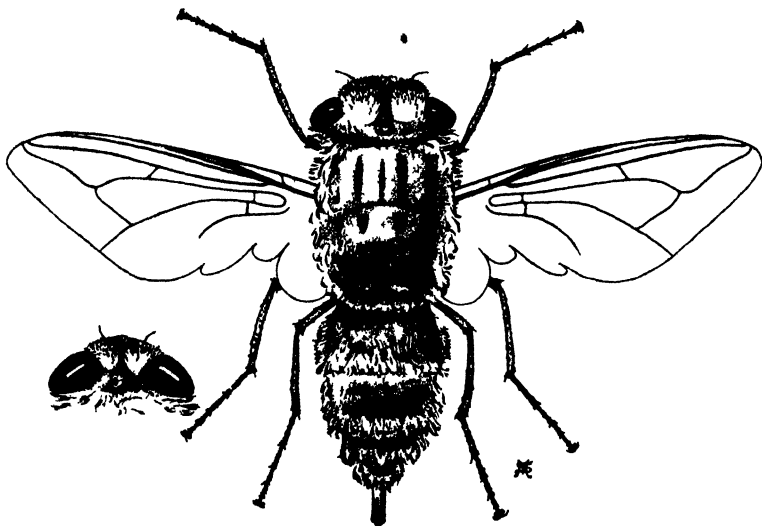


Fig 41 —*Hypoderma diana*. *Deer Warble Fly*. *Female*  $\times 45$ .

From nature

Latham at Duror, Argyllshire, on 11th June 1934. On the 13th to 17th June of the following year, and in the same locality, Mr Latham repeated the capture of five specimens of the same species; and again all the specimens were males.

So far as I am aware the *eggs* of the Deer Warble Fly have not been observed. Hides which I examined for eggs came from deer killed in July and August, after the end of the egg-laying season. Nevertheless, one would have expected to find the empty shells of the hatched eggs still adhering to the hair, had the animals from which the hides were taken been infested. It is almost certain that the eggs will be found to resemble those of *O. lineatum* and be attached to the host's hair. As regards the manner of the fly's attack and the reaction of the deer, there is no available information.

It is well known that *H. bovis* inspires such terror in its bovine host as to cause uncontrollable stampeding. *H. lineatum*, again, usually visits its host when the latter is standing or lying quietly on the ground, and the only reaction observed is an occasional kick of the host's hind-legs as an expression of slight annoyance. Inquiries among experienced gamekeepers and stalkers seemed to show that *H. diana* does not stampede its host, since none of the observers questioned could remember a single case of deer gadding during the warble-fly season. It is realised that precise information on the question is not readily obtainable, since it is well-nigh impossible to approach wild deer sufficiently close to make competent observations. It must be remembered, too, that the deer is subject to the attack of flies other than the warble fly. Included amongst these are various species of Horse Flies or Clegs (*Tabanidæ*), the Nasal Bot Fly (*Cephenomyia auribarbis*), and the Deer Ked (*Lipoptena cervi*), all of which combine to pester the deer and make it restless.

*Eggs.*—In the absence of the eggs, their period of incubation can be merely a matter of conjecture. By comparison it should not differ greatly from that of the eggs of the Cattle Warble Flies, which varies from three to six days. The actual entry of the first-stage maggot into the host has not been observed, but this is no doubt contrived by direct penetration of the skin as in *H. lineatum* and *H. bovis*.

*Larva.*—The grub of the Deer Warble Fly undergoes a development similar to that of the grubs of the Ox Warble Flies. After entering the host, it migrates through the connective tissue between the muscles until it finally appears beneath the skin of the back at the end of December or beginning of January. Its presence in the host then becomes discernible for the first time in the shape of a swelling known as a warble, induced by the grub's activities. The period of migration is a protracted one, which extends from the hatching of the grub in May or June to its arrival at the back of the host, and therefore occupies at least six months. In its wanderings it confines itself entirely to the connective tissue between the muscles. During all this time it continues as a first-stage larva, increasing in length from one twenty-fifth of an inch up to about half an inch. It is not until the grub perforates the skin of the back and for the first time establishes communication to the exterior that it undertakes its first moult and enters upon the second stage of its existence within the warble cyst. Its development thus conforms with that of the grubs of the two Ox Warble Flies which I discussed in the 'Transactions' of the Society for 1936. In a paper

published in 1932, I<sup>1</sup> gave it as my opinion that it was the grub of the third stage that first reached the back of the deer, a statement which appeared to agree with the facts then current concerning the course of development of the grubs of the Ox Warble Flies. In the light of the recent investigations of Knipling,<sup>2</sup> who discussed the ox parasites only, it is almost certain that the so-called grub of the third stage is merely the mature first-stage one. Grubs of the first stage have been found to occur beneath the skin covering the ribs of the host on 15th December. They were apparently making their way to the back. Incidentally, the walls of the gullet are apparently not visited during the process of migration. Examination of the gullets of some twenty deer during the autumn and early winter failed to reveal the presence of any grubs. In this respect the Deer Warble Fly appears to agree with *H. bovis* and differs from *H. lineatum*. First-stage grubs occur as late as the end of January, when the majority are found to have moulted and entered upon the second stage, which lasts for about one month. A second moult then occurs when the grub enters upon its third and ultimate stage, which continues for about two months. Actually there is considerable variation in the time of development of the various stages of individual grubs, so that during January grubs of all three stages may occur simultaneously in a single host deer. During February the grubs are found to be a mixture of second and third stages. As time advances, the proportion of third-stage grubs increases as more and more of the second-stage ones complete their moult.

The mature grubs begin to abandon the host at the end of March, and by the middle of April the host is practically free of warbles. The full-grown larva voluntarily forces its way through the aperture of the warble cyst by active contractions of its body. Dropping to the ground, it crawls along until it finds a suitable place of shelter at the base of a tuft of grass or under moss. On 17th April 1931 I observed the emergence of a mature grub from a warble of a deer that had been shot in Glenfalloch and watched another that had fallen to the ground, along which it crawled slowly until it disappeared among mossy vegetation.

At pupation the larval skin contracts, hardens, and changes to black, forming the pupal case, which is about three-quarters of an inch long and five-eighths of an inch broad. After four to six weeks the fly emerges by pushing off a circular lid at the upper fore end of the pupal case.

<sup>1</sup> Cameron, A. E., 1932. "Arthropod Parasites of the Red Deer (*Cervus elaphus* L.) in Scotland." Proc. Roy. Phys. Soc., Vol. XXII.

<sup>2</sup> Knipling, E. F., 1935. "The Larval Stages of *Hypoderma lineatum* and *Hypoderma bovis*." Jour. Parasitol., Vol. XXI.



The number of larvæ per host was found to be comparatively large during the late winter and early spring months. In one animal a piece of skin twelve by six inches yielded twenty-four

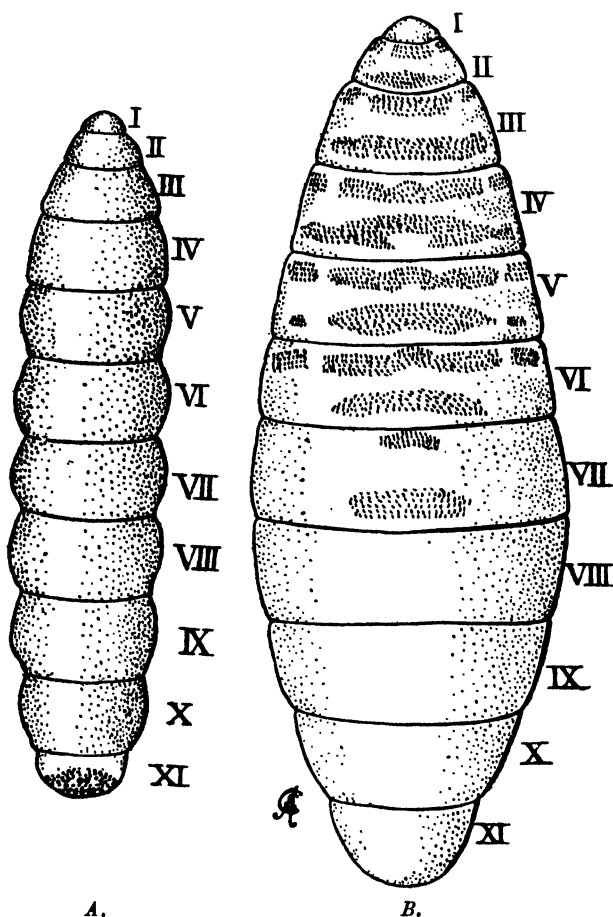


Fig. 42.—A. First-stage larva of *Hypoderma diana*, Deer Warble Fly.  $\times 8$ .  
From nature. Dorsal aspect

B. Second-stage larva of *Hypoderma diana*, Deer Warble Fly.  $\times 6$ .  
From nature. Ventral aspect.

grubs on 5th January 1931, whilst on 27th January a piece of precisely the same size, taken from another animal, produced thirty-seven grubs. Actual counts showed that few deer had an infestation of less than one hundred warbles. It must be recognised, however, that accurate figures are difficult to

obtain because of the variation of the rate of development of the grubs and the irregularity with which they arrive at the back of the host. For some reason unknown many grubs that succeed in reaching the back succumb before completing their development. In practically all the hides which I examined in March and April a number of mature grubs was found dead; presumably death was due to some reaction of the host. Certain of the dead grubs were flaccid and of a dirty grey colour; others were shrivelled and had apparently been dead for some time.

*Description of the Larval Stages.*—The three stages of the Deer Warble Fly were fully described by Brauer<sup>1</sup> so long ago as 1863, and it is merely my intention to present briefly the salient characters by which the three can be distinguished. So far as the first-stage grub is concerned, little is known of its existence until it has reached the host's back, and the description which follows applies to the larva just previous to the first moult.

*First Stage.*—The grub (Fig. 42 A) is transparent white, cylindrical, and of a uniform thickness throughout its length. It measures about half an inch long and one-sixteenth of an inch broad. Spines are practically absent. Around the spiracles (breathing pores) at the hind end there are concentric rows of numerous small black discs. There is a minute pair of sharp black mouth-hooks, which assist the grub in burrowing through the host's tissues and piercing the hide at the site of the warble.

*Second Stage.*—Just before it moults the larva of this stage (Fig. 42 B) is found to have increased to a length of three-quarters of an inch and its greatest breadth is three-sixteenths of an inch. It is still white and transparent, except that the segmental bands of spines, with which it is now invested, and the posterior spiracles are blackish-brown. In shape it is convex below and flat above and the last segment is up-curved. The prominent bands of closely arranged minute spines are present on segments II to VII (Fig. 42 B), but whereas they occur on the lower surface of all of these segments, they are represented on the upper side of segments II and III only. The last segment is uniformly invested with minute close-set black spines replacing the black discs of the first-stage larva. It has, therefore, a shagreened appearance.

*Third Stage.*—The full-grown grub (Figs. 43 A and 44 A) is about one inch long and three-eighths of an inch at its greatest

<sup>1</sup> Brauer, F., 1863. 'Monographie der Oestriden.' Wien.

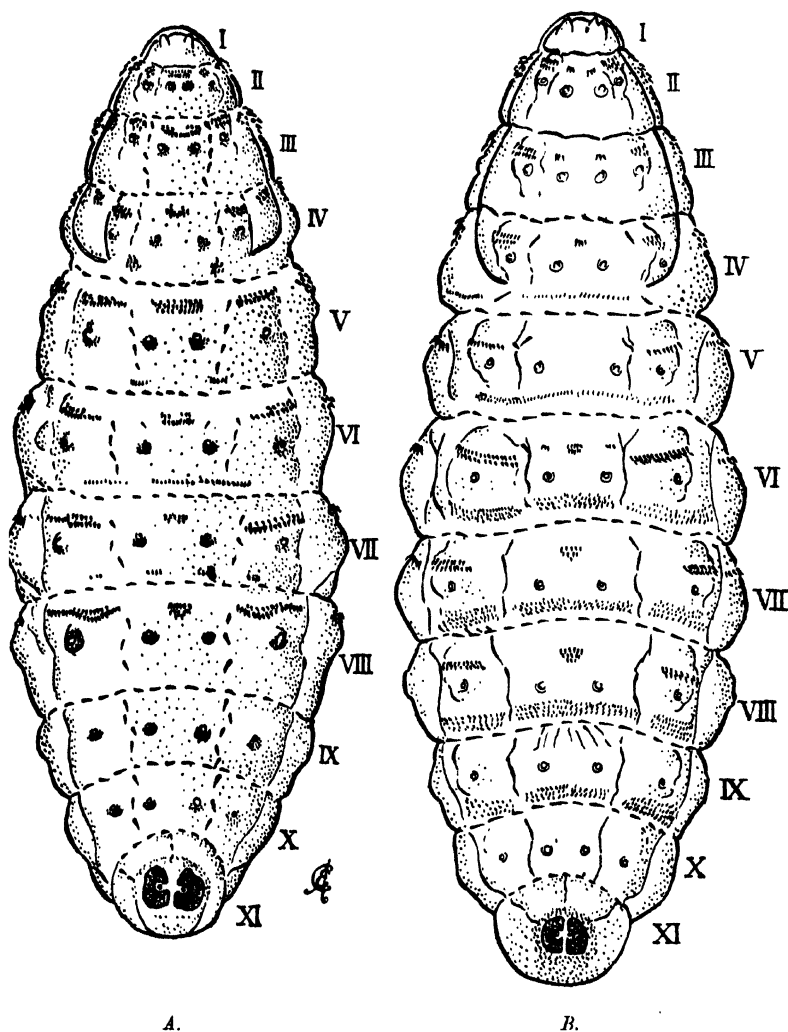


Fig. 43.—A. Third-stage (full-grown) larva of *Hypoderma diana*, Deer Warble Fly.  $\times 5$ .

From nature. Dorsal aspect. Note the absence of the posterior band of spines on segments VIII and IX. The posterior spiracles are divergent.

B. Third-stage (full-grown) larva of *Hypoderma lineatum*, Ox Warble Fly.  $\times 5$ .

From nature. Dorsal aspect. Note the presence of the posterior band of spines on segments VIII and IX. The posterior spiracles are closely apposed.

width. It is flat above and rounded below, the last segment uptilted. During growth its colour changes from white to

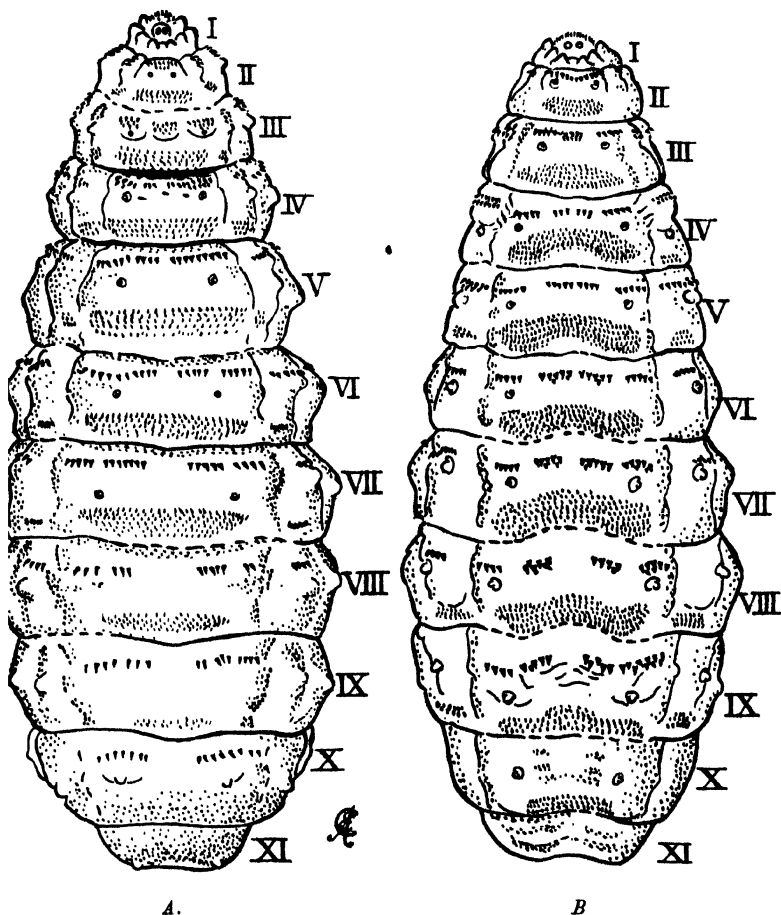


Fig. 44.—A. Third-stage (full-grown) larva of *Hypoderma diana*, Deer Warble Fly.  $\times 5$ .

From nature. Ventral aspect. Note the absence of the posterior band of spines on segment X.

B. Third-stage (full-grown) larva of *Hypoderma lineatum*, Ox Warble Fly.  $\times 5$ .

From nature. Ventral aspect. Note the presence of the posterior band of spines on segment X.

bone-yellow. Both in size and in general appearance it resembles the larva of *H. lineatum* and of *H. bovis*. A com-

parison of the second-last or tenth segments of the three species reveals differences by which they can be readily distinguished. In *H. bovis* the tenth segment is devoid of spines above and below and is unique in this respect. In *H. diana* (Fig. 44 A) the ventral surface of segment X has merely an *anterior* single row of spines interrupted in the middle; in *H. lineatum* (Fig. 44 B) there is a *posterior* band of several rows of spines. On the dorsal surface of segment X in *H. lineatum* there occasionally occurs a posterior band of spines, which because of its rarity has not been represented in Fig. 43 B. The absence of a posterior band of spines on the dorsal aspect of each of segments VIII and IX of *H. diana* (Fig. 43 A) is in direct contrast to the presence of prominent posterior spinous bands on the same side of the corresponding segments of *H. lineatum* (Fig. 43 B).

## 2. THE NASAL BOT FLY OF THE DEER (*Cephenomyia auribarbis*).

The habits of the Nasal Bot Fly of the deer are identical with those of the Sheep Nostril Fly, *Cephalomyia* (*Estrus*) *ovis*. In both the mode of reproduction is the same. The eggs are retained within the body of the fly until they are hatched, when the resulting first-stage grub is deposited in the nostril of the host. Larval development is completed in the throat and recesses of the nasal cavity, and the grubs may even wander into the respiratory tract with serious consequences to the host. In Glamorgan and Monmouthshire cases of epidemic pneumonia in sheep were found by Bisset<sup>1</sup> to be associated with the occurrence of the grubs of the Sheep Nostril Fly in the bronchi and bronchioles, at which they arrive accidentally by entering the glottis. It is suggested that the feeding of the larvæ on the tissues induces a pneumonic condition. It is not unlikely that fatalities in deer infested with the grubs of Nasal Bot Flies may arise from similar causes; at least, such has been the suspicion of one or two authors.<sup>2</sup> No such cases have, however, been reported in Scotland.

So far as records of capture go, the distribution of the Nasal Bot Fly in Scotland is limited to the counties of Sutherland, Ross and Cromarty, Inverness, Aberdeen, and Perth. Maggots recorded by Evans<sup>3</sup> as occurring in the throats of stags on Jura Island probably belonged to the

<sup>1</sup> Bisset, N., 1931. "The possible association of the Sheep Nostril Fly (*Estrus ovis*) with Pneumonia in Sheep." Welsh Journ. Agric., Vol. VII, pp. 363-367.

<sup>2</sup> Cameron, A. E., 1932. "The Nasal Bot Fly, *Cephenomyia auribarbis* Meigen, of the Red Deer, *Cervus elaphus* L." Parasitology, Vol. XXIV, p. 189.

<sup>3</sup> Evans, H., 1891. "Some Account of Jura Red Deer." Derby.

species under discussion, and likewise those described by Bloomfield<sup>1</sup> and Austen<sup>2</sup> from the root of the tongue of a red deer in Strathdon.

*Description of the Fly.*—The fly (Fig. 45) is robust, densely hairy, black, and broad in proportion to its length of five-eighths of an inch. It possesses a beard of pale golden hair, from which the fly derives its name of *auribarbis* or golden bearded. The investment of the body is arranged in five alternate broad bands of tawny and black hair, but not so

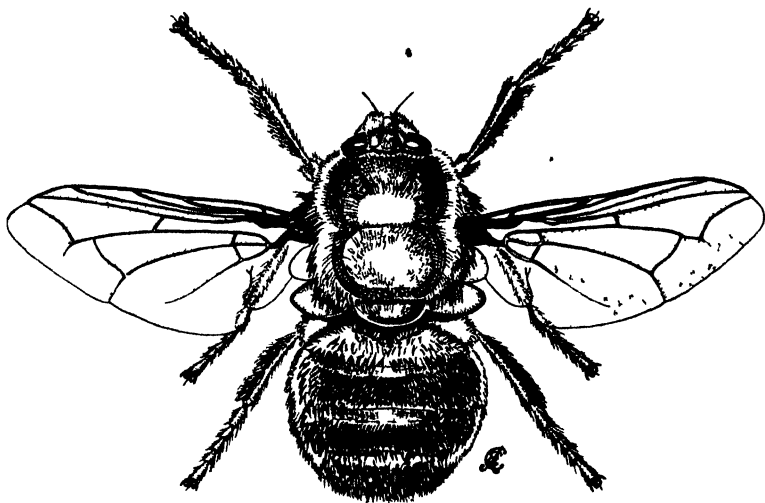


Fig 45 —*Cephenomyia auribarbis*. *Deer Nasal Bot Fly. Female.* × 4.

From nature After Cameron, *Parasitology*, 1932

dense as to obscure the glistening sheen of the underlying black cuticle.

*Life-history.*—In attacking its host, the female fly hovers in flight near the head of the deer and intermittently ejects a drop of fluid containing one or more first-stage larvæ into the deer's nostrils. During this operation the deer is said to become highly excited by reason of the persistent attentions of the fly and attempts to protect itself by repeatedly stamping its feet and snorting.

The *larvæ* of the first stage measure from one-twenty-fifth to one-eighth of an inch. They are found attached to the

<sup>1</sup> Bloomfield, E. N., 1898. "*Cephenomyia auribarbis* Mg. larvæ, &c." Ent. Mon. Mag., Vol. IX.

<sup>2</sup> Austen, E. E., 1898. "Notes on the Cestrine Parasites of British Deer." Ent. Mon. Mag., Vol. IX.

lining membranes of the nasal cavities from July to February. Grubs of the second stage migrate to the throat and increase in length up to three-eighths or four-fifths of an inch. They occur from February to May. After a second moult the grub of the third stage (Fig. 46) appears. It continues to increase in length up to one and a half inches, becoming full grown in May or June, when they are found in groups of thirty to sixty in the recesses of the pharynx and nasal cavities. On arriving at maturity they are ejected by the violent sneezing of the host, and entering a crevice of the soil they soon pupate. After a period of twenty to thirty days the fly emerges from its pupal case to renew the life-cycle. There is but one generation per year, and of this the development of the grub occupies ten to eleven months.

The abnormal occurrence of a grub of the third stage in a region of the host other than the nose or throat was recorded by me<sup>1</sup> in 1932. The specimen was found embedded in fat in the pelvic region of a deer from Blair Atholl, Perthshire. How it arrived there is a matter of conjecture. From Fig. 46 A and B it will be observed that each body segment, except the first and the last, is encircled by an anterior band of several rows of stout recurved spines. The last segment ends below in a fleshy process armed with spines, which may be used in propelling the larva. The powerful recurved mouth-hooks are sharply pointed. They serve to anchor the grub to the tissues of the host and secure it against ejection when the host snorts.

### 3. THE CASTOR BEAN TICK (*Ixodes ricinus*).

Examination of deer periodically throughout a whole year showed that they were most heavily infested by the Castor Bean Tick from July to October, a few stragglers being found on the hide of a deer as late in the winter as 7th January. The general effect of an intense infestation of the host is restlessness and poverty of condition resulting from the numerous punctures made by the parasites in sucking blood, the loss of which may be a serious drain on the host's vitality. More important, however, from the standpoint of the sheep-farmer is the rôle of the deer in spreading the tick over hill grazings during its extensive wanderings. Gorged ticks drop from the host wherever it may chance to roam and are picked up at a subsequent stage by the same or another kind of host. The following brief account of its life-cycle will serve to summarise the tick's association with its host or hosts.

The Castor Bean Tick is a three-host parasite, requiring for

<sup>1</sup> Cameron, A. E., 1932. "Arthropod Parasites of the Red Deer (*Cervus elaphus* L.) in Scotland." Proc. Roy. Phys. Soc., Vol. XXII.

each of three stages of its life-history—larva, nymph, and adult—a separate and distinct bird or mammalian host. As a rule birds are not heavily infested, and harbour only the

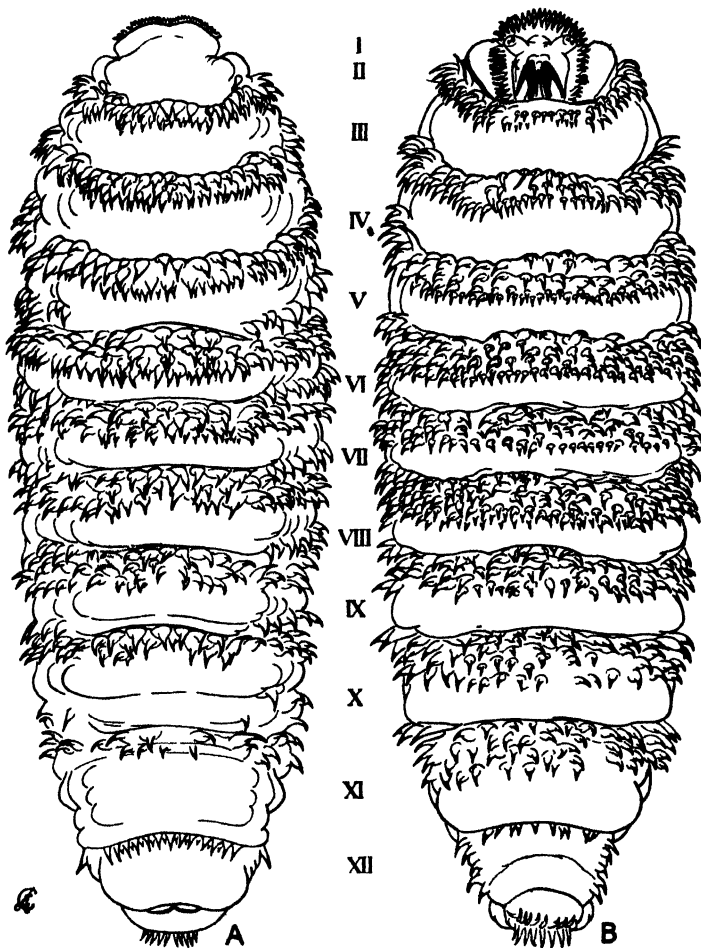


Fig 46 — A. *Cephonomyia auribarbis*. Full grown larva, dorsal aspect.  $\times 8$ .  
B. *Cephonomyia auribarbis*. Full-grown larva, ventral aspect.  $\times 8$ .

From nature After Cameron, *Parasitology*, 1932 Note the powerful mouth-books and prominent bands of spines encircling the body

larvæ and nymphs. The many vicissitudes which the tick must encounter in achieving its objective on three different occasions are in some degree counterbalanced by the extraordinary abundance of its progeny. The acquirement of a



host is not actively pursued by the parasite, but is merely contingent on the chance passage of a suitable animal that may happen to brush against herbage infested by the somewhat passive tick.

Pairing of the ticks occurs on the host, where the males (Fig. 47) are frequently found mated with females of varying degrees of engorgement. Mating accomplished, the males drop to the ground and soon afterwards they die. The

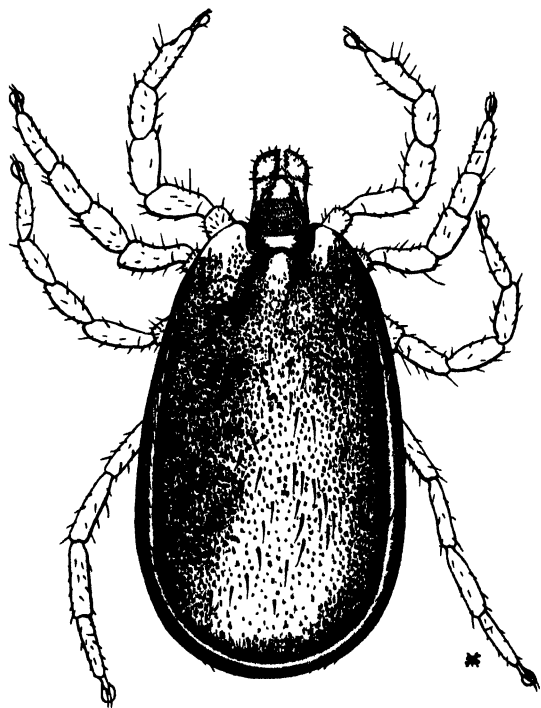


Fig. 47.—*Ixodes ricinus*. *Castor Bean, Sheep or Deer Tick*. *Male*.  $\times 33$ .

From nature.

females, on the other hand, remain for about a week on the host, which they abandon only after they have become fully engorged (Fig. 48). On the ground they seek the shelter of a convenient stone or tuft of grass, beneath which they crawl. So far as the sheep is concerned, tick infestation is most pronounced in the period March to June, after which their numbers become considerably reduced until a recrudescence of less intensity occurs in October and November.

Eight days after the replete female has become detached

from its host it begins egg-laying on the ground, the process occupying several days. During its progress the female undergoes a gradual shrinkage, and deep furrows and wrinkles appear, which interfere with the smooth contours of its previous rotundity. The eggs accumulate in a steadily increasing mass in front of the tick, until as many as 20,000 may be laid, when the female succumbs to the effects of utter exhaustion.

In forty days the eggs hatch to produce the six-legged larvæ, which undergo a process of hardening for ten days before making an attempt to seek a host. Larvæ that are unsuccessful in their quest are nevertheless capable of resisting starvation for six to twelve weeks, sustaining themselves on the residual mass of yolk carried over from the egg and enclosed in the larval gut. Ascending to the extremities of grass leaves and stems, the larva rests on its middle and hind pairs of legs, whilst the fore pair is held extended in the air and maintains a continual exploratory movement, suggestive of unsatisfied desire. Having acquired a host, the larva becomes engorged and drops to the ground in four or five days. Here the blood-meal is digested at leisure, and internal changes occur which result after thirty days in the emergence of the nymph—now equipped with four pairs of legs—from the sloughed larval skin.

Like the larva, the nymph remains quiescent for a period of ten days, during which its skin hardens. Only then is it ready to seek a host, employing the methods displayed by the larva. On the host it remains for four days, by which time it is replete and falls to the ground. After the elapse of sixty days the adult, male or female, withdraws itself from the moulted nymphal skin, when it rests and hardens for ten days before becoming attached to the third and final host.

The time taken to complete the cycle is variable according to the season and may occupy six to thirty-six weeks. The various stages succeed each other more rapidly in summer than in winter, when the lower prevailing temperatures may prolong the period of larval development for as much as five months. Under conditions of favourable humidity unfed adults may be maintained alive in the laboratory for two years; desiccation, on the other hand, serves to weaken their resistance, and results in a material reduction of their longevity.

#### 4. THE DEER KED (*Lipoptena cervi*). -

The Ked of the red deer is also a parasite of roe and fallow deer and is found on the skin and among the hair of its host. On the red deer in Scotland it occurs in greatest numbers from July to October. Its general colour is blackish, and it measures about one-quarter of an inch in length. The

body is compressed, and the skin, which is tough and leathery, is amply equipped with recumbent bristles. Each of the six powerful legs terminates in a pair of sharply recurved claws, which must be a source of considerable irritation to the host

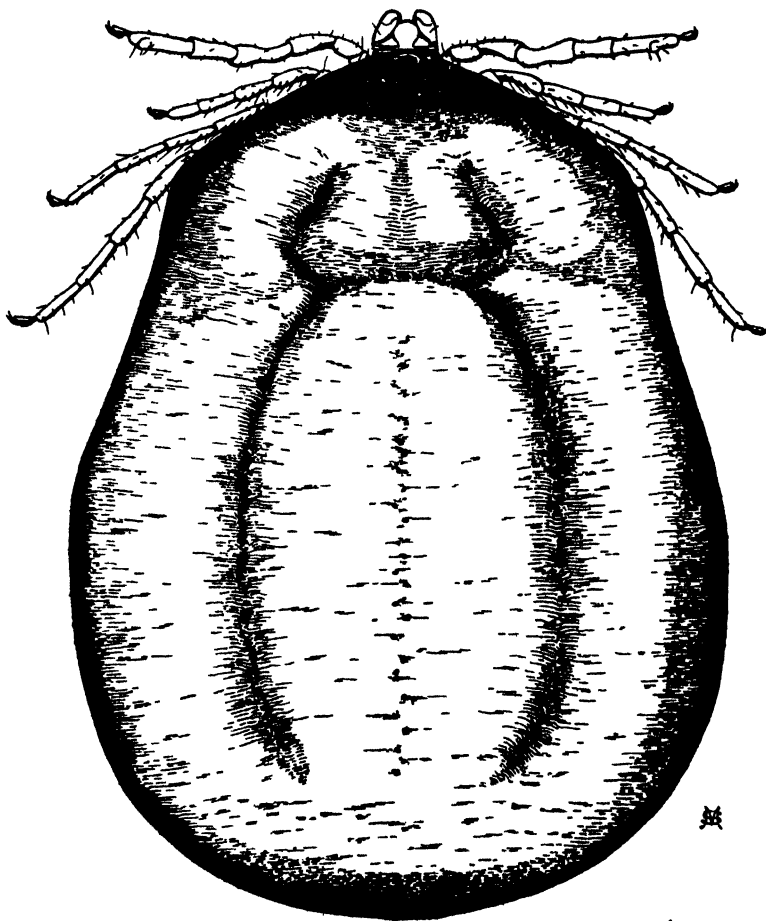


Fig 48 — *Ixodes ricinus* *Castor Bean, Sheep or Deer Tick. Gorged Female. × 12*

From nature

as the parasite creeps over the skin. The piercing apparatus of the mouth is protrusible and armed at its extremity with sharp teeth, with which it punctures the deer's skin and draws the blood on which it subsists.

Three close relatives of the Deer Ked, with almost identical

habits but different hosts, are also found in Scotland—namely, the Sheep Ked (*Melophagus ovinus*), the Bird Ked (*Ornithomyia avicularia*), a parasite of many wild birds, and the Grouse Fly (*O. lagopodis*). Whilst the first is devoid of any trace of wings, the two last possess functional organs of flight which they retain throughout adult life. In this respect the Deer Ked occupies an intermediate position between Sheep and Bird Keds, since it enters upon adult life equipped with functional wings and is frequently found in flight in deer forests on warm summer days. The two sexes are thus enabled to find each other and to search for a host. This accomplished, the wings become obsolete and are soon shed, breaking along a line of weakness that occurs near the base of either. Stubs continue to persist as vestiges, but so closely applied to the upper surface of the body as not to impede the progress of the parasite among the hair of the host animal.

By comparison with the winged condition of its near relatives, the entire absence of wings in the Sheep Ked illustrates an adaptation that is correlated with the assemblage under human care of a domesticated host in flocks. The habit of close herding of sheep offers its wingless parasite ample opportunities of passing by creeping from one member of the flock to another, so that the necessity of wings as aids to its dissemination does not arise. Additional facilities for transference are also provided at the time of shearing when lambs readily pick up the keds by casual contact with the shorn infested fleeces. Such opportunities are denied the Deer and Bird Keds which are respectively associated with hosts of a more open habit of herding or flocking. For these, wings are important auxiliaries to their effective dispersal among their hosts.

Keds are peculiar in their mode of reproduction, in which they resemble tsetse flies. Only one egg matures at a time, and instead of being deposited is retained within the body of the pregnant female. On hatching, the maggot is likewise retained and nourished until it is full grown. Immediately after birth, which occurs once about every ten days, the maggot transforms to a pupa. The pupal cases of Bird Keds drop to the ground, whereas those of the Sheep and Deer Keds are firmly glued to the wool of the host by an adhesive cement. The adults emerge in two to four weeks, development being slower in winter than in summer.

## 5. THE DEER BITING LOUSE (*Trichodectes cervi*).

The biting lice of mammals are wingless parasites, all of which belong to the single family Trichodectidæ of the Mallophaga. The members of this family are characterised

by a sickle-shaped appendage on each side of the second-last segment of the abdomen, barely reaching its extremity (Fig. 49). The antennæ are composed of three segments and the legs are provided each with a single terminal claw. The body is generally broad and flat; the head is broader than the thorax and is excavated on each side at the insertion of the antennæ. In front of the excavation there is a marked projection. The colour of the abdomen is a dirty white and paler than that of the head and thorax, which have a slight rusty tint. Each of the abdominal segments is traversed on its upper surface by a chestnut-brown band.

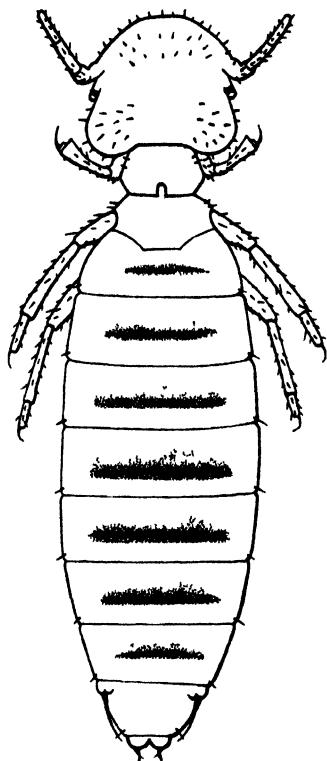


Fig. 49.—*Tricodectes cervi*. Biting Louse of Deer.  $\times 60$ .

From nature

A comparison of the Biting Louse of the deer with that (*Trichodectes scalaris*) of the ox shows that the anterior margin of the head of the former is less salient and the sides (temples) of the head behind the bases of the antennæ are less prominent. The banding of the abdomen is less pronounced and the body more elongated and narrower than that of *Trichodectes cervi*.

Like the other biting lice of mammals, *T. cervi* lives on the skin of its host and feeds on the scurf-skin and hair, using the powerful jaws on the lower side of the massive head to good effect. By reason of their feeding activities biting lice induce in their hosts intense irritation which results in restlessness and seriously interferes with the grazing of the infested animal. *T. cervi* is most abundant during the winter months when the

coat of the deer is thick; as the summer advances their numbers gradually decrease. The eggs are glued to the hair of the host, and the young lice, which hatch after a few days' incubation, resemble the adults, except that they are smaller and paler in colour. The antennæ and legs are at first relatively small, but increase with each moult, the exact number of which is unknown. With the final moult the adults appear, differentiated as males and females. Biting lice continue to breed throughout the year.

The life-histories of biting lice do not lend themselves readily to investigation, and the difficulties of keeping them under observation are not decreased where the host animal is a wild one. Their entire development is passed on the host. Removed from the latter, they live for a very short time and they are not amenable to breeding under artificial conditions in the laboratory.

### THE APPLE LEAF MINER (*Lyonetia clerckella*).

The Apple Leaf Miner is one of a vast assemblage of minute moths which are known as the Tineids, insects of diverse habits and tastes, the majority of which during larval life are miners in leaves. Tineid moths are usually recognisable by their narrow wings which are bordered with long hair fringes.

*Distribution.*—The Apple Leaf Miner is distributed through northern and central Europe and extends as far as 60° N. latitude. It has been recorded as a pest of apple and cherry trees in Germany, Denmark, Norway, Sweden, and Russia. According to Meyrick,<sup>1</sup> it is rather a common insect in England and Ireland. Theobald<sup>2</sup> first recorded it as a pest of the apple in 1904, and later gave an account<sup>3</sup> of its habits and life-history in his 'Insect Pests of Fruit.' It has also been mentioned by Carpenter<sup>4</sup> as damaging apple foliage in Co. Louth, Ireland.

So far as I am aware the Apple Leaf Miner has not previously been noted in Scotland. In August 1936 its presence was revealed in an orchard at Cupar, Fife, on apple trees of about five years old, the variety being Ellison's Orange. The infested trees had been imported three years previously from the south of England. The discovery of the insect was made by Mr J. W. Hall, Department of Horticulture, East of Scotland College of Agriculture, who referred the damaged leaves to me for identification.

*Food-plants.*—In addition to the apple and cherry, *L. clerckella* has also been recorded from the plum, hawthorn, mountain ash, and birch, but in Britain the apple would appear to be its sole food-plant.

*Life-history.*—There are three generations of the Apple Leaf Miner per annum. The moths of the third generation,

<sup>1</sup> Meyrick, E., 1895. 'A Handbook of British Lepidoptera.' London.

<sup>2</sup> Theobald, F. V., 1904. 'Second Report on Economic Zoology' (Brit. Mus. N.H.). London.

<sup>3</sup> ———, 1909. 'Insect Pests of Fruit.' London.

<sup>4</sup> Carpenter, G. H., 1916. "Injurious Insects and other Animals observed in Ireland during the years 1914 and 1915." Econ. Proc. R. Dublin Soc., Vol. II, No. 12.

which appear in the autumn, spend the winter under pieces of bark, moss, and lichens on the trunks and branches of fruit trees and emerge from hibernation in April. The *moth* is about one-third of an inch across the expanded wings. The fore-wings are lance-shaped, shining white, sometimes partly or wholly overspread with brown, and a black dot at the apex. The hair fringe is brownish-grey, as are the hind-wings and their fringes.

In April the female lays on the underside of each leaf one or more eggs, which are introduced each into a small hole previously made by the ovipositor. In fourteen to sixteen days the egg hatches, and the caterpillar begins to eat through the green tissue a long narrow serpentine tunnel of a meandering course. Three such tunnels are to be seen in the single leaf in Fig. 50, and the illustration also shows that each tunnel becomes gradually enlarged as it proceeds, in conformity with the increasing size of the caterpillar, which leaves in its wake a trail of excreta. After three to four weeks the green *caterpillar* is fully developed, about one-quarter of an inch long and somewhat flattened. The head is dark; there are two dark spots on the first body-segment and a hair on each segment. The legs are brown.

The mature larva escapes from the termination of the tunnel through an opening which it makes in the wall and is evident in the lower of the two galleries present on the right side of Fig. 50. The caterpillar crawls about on the surface of the leaf, but after a short time comes to rest and spins a silken cocoon, generally on the under surface of the leaf which it has tunnelled, or upon a fresh one. The cylindrical cocoon is open at both ends, and within its walls the caterpillar in a few days transforms to a chrysalis or *pupa*, which is of a pale green hue with the fore-end and the wing-cases yellowish-brown. Its length is about one-eighth of an inch. In the summer the chrysalis stage lasts for thirteen to fourteen days, but is longer in the autumn. The first generation of moths appears in June, the second in August, and the third in October, the last entering hibernation and appearing again the following April.

*Damage.*—*L. clerckella* rarely increases to such an extent as to defoliate the host tree. Occasionally, however, the infestation may be so intense that every leaf of a tree may be tunnelled, and as many as three or four cocoons have been observed on each leaf. In a serious outbreak of the Apple Leaf Miner which occurred in Sweden in 1921-23, Kemner<sup>1</sup> states that as many as twenty to forty-four cocoons were

<sup>1</sup> Kemner, N. A., 1926. "Clorcks minearmal (*Lyonetia clerckella* L.), dess biologie och metoderna för dess bekämpande. [*L. clerckella*, its Biology and Control]." Medd. Centralanst. försöks. jordbruks., No. 301.

present on individual leaves. Attacked leaves may become shrivelled and die during the growing season, and this injury may result in a serious check to the growth of the tree. The long sinuous tunnels are clearly diagnostic of the activities of



Fig. 50.—*Lyonetia clerckella*. *Apple Leaf Miner*.

From nature. Slightly enlarged. The leaf shows three distinct serpentine mines made by the caterpillars.

the Apple Leaf Miner and form a ready means of recognising an established infestation.

*Control.*—It is recommended that the trunks of infested trees should be sprayed in the early spring with eight to ten



per cent carbolineum in order to destroy the moths hibernating in the crevices of the bark. To ensure thorough penetration of the spray, the trees should be previously scraped and the débris destroyed. During the growing season the caterpillars in their mines and the pupæ in their cocoons can be destroyed by a spray containing one part of pure nicotine in 1000 parts of water.

The parasites of *L. clerckella* have not been studied in this country. In Sweden, however, Kemner (*loc. cit.*) has succeeded in rearing eight species of hymenopterous parasites, which hibernate as pupæ among the fallen autumn leaves in orchards that have been attacked by the moth. It is, therefore, important that these fallen leaves should be conserved, and, if occasion arises, they may be usefully transported to other places where the pest is known to be increasing. In the spring the parasites complete their development and sally forth to attack and lay their eggs in the mining caterpillars in the leaves. Since the moth does not hibernate among the fallen leaves, there is no risk of extending its spread by adopting this mode of control.

#### APPLE LEAF BLISTER MOTH (*Ornix* sp.).

From the same orchard at Cupar, Fife, which produced the leaves attacked by the Apple Leaf Miner, Mr Hall in August 1936 also collected leaves which were badly disfigured by blotches (Fig. 51) representing the mines of a caterpillar of another Tineid moth, probably a species of *Ornix*. As the caterpillars had abandoned the mines before the damaged leaves were obtained, it was unfortunately not possible to rear the moths and determine the particular species. By comparing Figs. 50 and 51, it will be seen that the injury is readily distinguishable from that made by the Apple Leaf Miner. During its growth the caterpillar keeps enlarging the area of the blotch at the circumference by working in concentric circles from the centre, where it hatched from the egg. The course of its progress can be readily followed in old blotches by the trail of excreta which it leaves behind.

The trees attacked were of the variety Lord Grosvenor, about fifteen years old and, so far as could be learned, they had not been infested in previous years. Damage of a kind similar to that illustrated was attributed by Theobald (*loc. cit.*) to *Parornix petiolella*, which has also been reported by Hodson and Beaumont<sup>1</sup> as causing considerable injury to apple foliage in the south of England. Whilst there appears

<sup>1</sup> Hodson, W. E. H., and Beaumont, A., 1929. Sixth Annual Report Dept. Plant Path. for the year ending 30th September 1929. Pamph. Seale-Hayne Agric. Coll., No. 31.

to be doubt as to whether *Parornix petiolella* occurs in the British Isles, a closely related species, *Ornix guttea*, is a reputed miner of the leaves of apple in Britain. That the latter is capable of causing considerable damage to apple foliage is



Fig. 51.—*Ornix* sp. *Apple Leaf Blister Moth*.

From nature. Natural size. The leaf shows eight blisters made by the caterpillars.

certified by the investigations of a Russian author, summarised in the 'Review of Applied Entomology,' Vol. XXI, p. 121, 1933. In one district of western Russia it was said to have infested fifty per cent of the leaves. Unlike *L. clerckella*, *O. guttea* pupates in a cocoon under the bark of the apple tree or in cracks, and hibernates in the pupal stage.

It is recognised that definite identification of the Apple Leaf Blister Moth must rest upon the rearing of the adult, and it is proposed that this should be done as soon as leaves infested by the caterpillar become available.



Fig. 52.—*Adelges cooleyi*. *Sexuparae* on twig of *Sitka spruce*.<sup>1</sup>

From nature. About natural size. After Cameron, *Ann. App. Biol.*, 1936. The sexuparae migrate from the Douglas fir to the Sitka spruce in summer. They settle on the needles of the spruce, become coated with white wax, and lay eggs from which the sexual generation is produced.

#### THE DOUGLAS FIR ADELGES (*Adelges cooleyi*).

In the 'Transactions' of last year reference<sup>1</sup> was made to researches that were being conducted in the Department of

<sup>1</sup> Cameron, A. E., 1936. "Insect and Other Pests of 1935." *Trans. Highland and Agric. Soc. Scotland*, Vol. XLVIII, pp. 112-115.

Agricultural and Forest Zoology, Edinburgh University, and at several Scottish forest plantations in order to elucidate the life-history and habits of this important pest of Douglas fir and Sitka spruce (Fig. 52). As a result of these investigations, an account<sup>1</sup> of which has been published, it has been demonstrated for the first time that the life-cycle of *Adelges cooleyi*



Fig. 53. *Adelges cooleyi*. Foundress on Sitka spruce

From nature Natural size After Cameron, Ann. App. Biol., 1936

is complete in Britain. Determination of the fact of completion depended upon the discovery of the missing two of the five generations that normally compose the round of the biennial life-cycle. This is divided between the Sitka spruce and the Douglas fir in the ratio of three generations to two. The hitherto missing generations were the foundress or stem-mother and the gall-dwellers of Sitka spruce. Continuation of the investigations<sup>2</sup> in 1936 has served to confirm the facts of the life-cycle established in 1935. In addition, the sexual

<sup>1</sup> Cameron, A. E., 1936. "*Adelges cooleyi* Gillette (*Hemiptera, Adelgidae*) of the Douglas fir in Britain: completion of its life-cycle." Ann. App. Biol., Vol. XXIII, No. 3, pp. 585-605.

<sup>2</sup> ——— "The present status of the Douglas fir Woolly Aphis (*Adelges cooleyi*) in Britain." Forestry, Vol. X, No. 2, pp. 133-142.

generation has been studied more thoroughly and the development of its five component stages traced. Whilst the mortality attendant upon its development is high, there is evidence that it is becoming gradually acclimatised. So far, the single fertilised egg laid by the female of this generation has eluded observation.

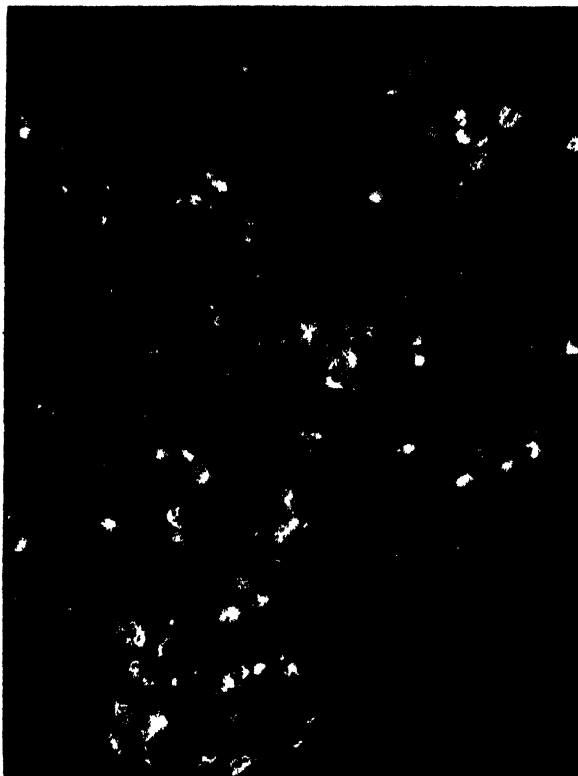


Fig. 54.—*Adelges cooleyi*. Colonist generation on Douglas fir.

From nature. About natural size. After Cameron, *Ann App Biol*, 1936. Each insect is hidden beneath a coating of wax.

Two significant contributions to the biology of *A. cooleyi* emerged from last year's studies. The first had reference to the lethal effects of spring frosts on the foundress and gall-dwelling generations. In one locality in April 1936 temperatures ranged as low as 20°-25° F. on four successive nights, with the result that about 65 per cent of the foundresses (Fig. 53) were destroyed, whilst the unburst buds of the host tree, Sitka spruce, were unaffected. Similar low tempera-

tures in May 1935, whilst destructive of the early stages of the gall-dwelling generation, created great havoc among the now opened buds. It is thus apparent that early spring frosts favour the host tree at the expense of the pest, but later ones may prove so injurious to the buds as to offset any advantage accruing from their insecticidal action. However this may be,



Fig 55. - *Adelges cooley*. Open, dead gall on Sitka spruce.

From nature. About natural size. After Cameron, *Ann. App Biol*, 1936. The galls open in September, and the winged gall-dwellers return to the Douglas fir.

it is certain that the lethal effect of spring frosts on the pest is correlated with a decided reduction of the number of its galls the following summer.

The other contribution concerned the migratory habits of the recently hatched young of the first summer brood of the colonist generation (Fig. 54) on the Douglas fir. In May and June the branches and trunks of infested trees were

found to be swarming with the minute brownish insects that in places coated the bark. On the branches two main streams

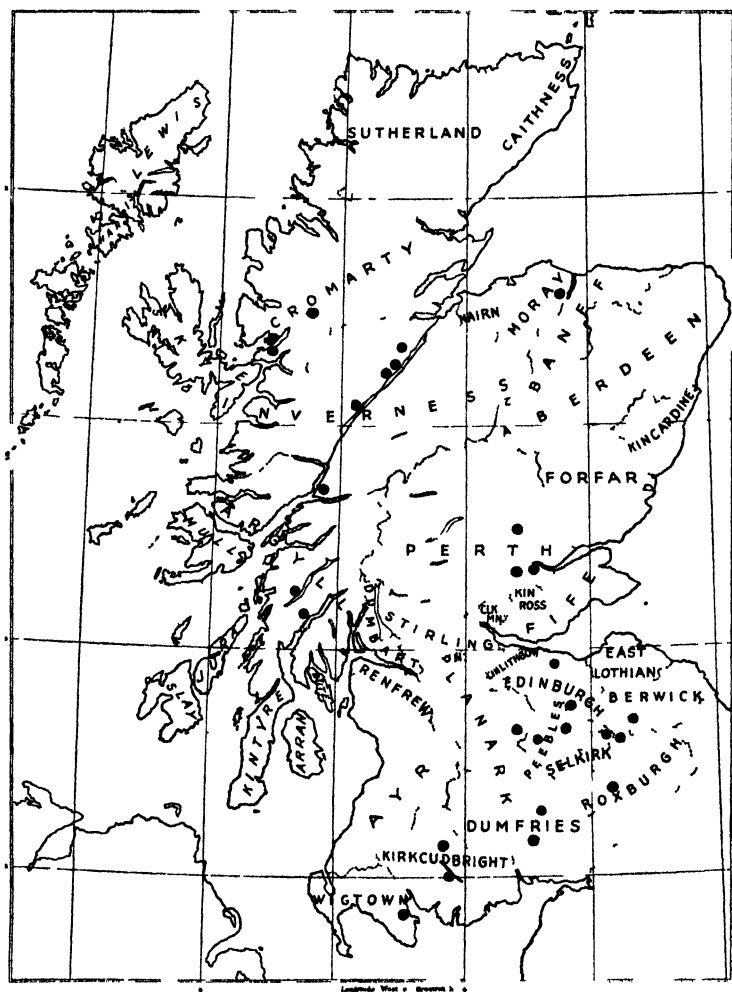


Fig 56 — Map showing the localities, marked by black dots, where the galls of *Adelges cooley* have been found

After Cameron, *Forestry*, 1936

of traffic were discerned, one in which the insects were travelling upwards to the new shoots, there to settle on the needles of the current year's growth, the other down the branches to

the trunk. On the latter, two streams of traffic were also observed, one of ascending insects, the other of individuals descending and spreading out on the vegetation beneath the trees. Additions to the countless numbers of the ground population were also made by the voluntary detachment of many which dropped from the branches to the ground. Distributing themselves widely on the forest floor, the majority perished either from starvation or the effect of low ground-temperatures, heavy dews, and heavy rains. Some contrived to reach the trunks of Douglas fir and contributed to the ascending stream of traffic. The purposeless nature of their wanderings is implied by their occurrence on the trunks, branches, and leaves of such conifers as Sitka and Norway spruce, that are entirely unsuitable for the completing of their development. Their presence thereon is, however, not explained solely by random migration, but partly by the deposition of individuals dislodged from an infested Douglas fir, the branches of which may be interlaced with those of an adjoining Sitka spruce, and partly by the fortuitous settlement of others borne by the wind. Despite the fact that the resources of the colonist generation are considerably depleted by the aimless migration of the larvæ of its first summer brood, the survivors are sufficiently numerous to produce a heavy infestation of the young leaves of the Douglas fir.

*Distribution of the Galls.*—As the result of surveys made in 1935 and 1936, it has now been established that the distribution of the galls (Fig. 55) of *A. cooleyi* extends from the Solway Firth to Ross and Cromarty, involving twenty-eight localities spread over fourteen counties. At the same time it must be remarked that the surveys were not so exhaustive as to embrace all possible localities. Evidence resulting from the surveys seemed to indicate that the gall generation had become more thoroughly acclimatised in the southern than in the northern counties, as is shown in the accompanying map (Fig. 56). The galls, too, were found to be more abundant, judged from the number per infested tree, on Sitka spruce planted at or near sea-level, where the foundress, its eggs, and the young gall-dwellers are less liable to the occurrence of lethal spring frosts than at higher elevations inland. Up to the present the galls have not been recorded from any part of Britain other than Scotland.



## SHEEP DIPS AND DIPPING.

By **PROFESSOR JAMES HENDRICK, B.Sc., F.I.C.,** and **WALTER MOORE, B.Sc.,**  
University of Aberdeen.

FROM time immemorial we have records of injury sustained by sheep from external parasites. A disease resembling sheep scab is mentioned in the Scriptures (Leviticus xxii. 22), and this same condition was well known in classical times and is recorded by Cato, Virgil, Pliny, and others. All the common pests in this country were known to early writers of treatises on agriculture. Thus we get descriptions and suggested treatments of the 'Sheep Maggot Fly,' Ticks, Scab, and Keds. At first, suggested remedies were confined to hand treatment of the affected part, but the 'Complete Grazier' [1], published in 1807, describes a form of dipping which was used by Lord Somerville, in the County of Norfolk, to control 'Ticks.' This work recommended that "Four pounds of soft soap and two pounds of arsenic be steeped in thirty gallons of water, and the animals be immersed in the infusion, their heads being carefully kept above water, and the sheep being sheltered from rain for one or two days. The wool must be closely pressed, and the liquor that runs off be caught in a tub, or other vessel, for future use. The proportion above specified is sufficient to bathe forty lambs." This practice does not seem to have been generally adopted, for it is not until 1871 that the practice of dipping is described in 'The Transactions of the Highland and Agricultural Society' [2]. The practice in vogue up to the 'sixties of last century was to hand-dress the affected part with various substances. The methods of hand-dressing or smearing are described in the early volumes of the 'Transactions of the Highland Society' [3], and consisted of rubbing the dressing into the infested area by hand. Liquids also were applied by pouring them from a can and rubbing well into the wool. These methods were applicable to small numbers, and suffered from the fundamental weakness that they only dealt with the parts of the animal in which the disease revealed itself and left unaffected the parasites on other parts of the body.

In the middle of last century a great change came over sheep farming. The increasing prosperity of the people raised the standard of living and increased the demand for a better quality of meat. At the same time, experiments in crossing and animal nutrition were beginning to reveal

the possibilities of early maturity and increasing profits, so that points connected with the welfare of sheep forced themselves upon flock-masters. The losses sustained through parasites drew attention to the need of assistance to the sheep, and in this way the practice of the complete immersion of the entire sheep by dipping came to be adopted. It was found that immersion accomplished all that hand-dressing had previously done, and, generally speaking, did it very much better, while at the same time it gave the unaffected part of the sheep some degree of protection against parasitic attack.

One of the early methods of dipping was described by N. P. Stewart, in 1871, in this Journal [2]. It reads: "Use two large tubs—one for immersing the sheep in, and the other having a close hurdle or piece of wire-netting nailed over for pressing the liquid out of the fleece." An improvement was made upon this primitive apparatus by constructing a rectangular bath with a draining board attached upon which the sheep were placed, the surplus dip squeezed out of the fleece and permitted to flow back into the bath. This type held the field for a number of years in Great Britain.

With the development of sheep farming in the Colonies, and the increase in the size of Colonial flocks, it was found impossible to dip with the hand bath, because neither sufficient time nor sufficient labour was available. The result was that large sheep farmers had either to invent a more suitable method of dipping or to leave their flocks untreated. This led to the invention of the swim-bath, where it was found that the sheep could be plunged into a bath containing poisonous dip and swim about until the fleece was thoroughly saturated, without much danger to the animal. This method had the additional advantage that all the labour required was to collect the sheep, put them in the bath, and return them to the fields. The type of bath developed in Australia was not generally suited for adoption in Britain, because the flocks here are much smaller, and the cost of filling one of the large Colonial baths would be prohibitive. When a modified form of swim-bath was introduced it was adopted with great rapidity. Various labour-saving attachments were introduced to expedite the dipping, and now this type of bath is customary in all parts of the world, although hand-smearing is still practised in certain parts of France and Spain.

The success of dipping in eradicating scab in New Zealand and some of the Australian Colonies led the Government of this country to consider the advisability of adopting compulsory measures for dealing with external parasites of sheep.

In 1903, the President of the Board of Agriculture appointed a Committee to investigate experimentally, and to inquire into and report upon:—

1. "The composition and essential constituents of efficient

dips and other preparations for the treatment and dressing of sheep, and their effect upon the animal treated or dressed, and upon the parasites and other organisms for the destruction of which they are used."

2. "The methods in which such dips and other preparations should be employed and the appliances and facilities for the purpose."

3. "The times and intervals at which sheep should be treated or dressed, regard being had (a) to the life history and characteristics of the sheep-scab acarus and of the other parasites and organisms of sheep which require external treatment, and (b) to the practical conditions under which sheep farming is carried on in various parts of the United Kingdom."

The Committee met for the first time on May 8th, 1903, and proceeded to examine thirty-one witnesses who were representative of sheep-farming interests both at home and abroad. Before the Committee had finished examining the witnesses, Parliament, in August 1903, passed an Act amending the Diseases of Animals Act, 1894, in relation to Sheep Scab. The Diseases of Animals Acts date from 1848, when two Acts of Parliament were passed to deal with an outbreak of sheep-pox which had been introduced from the Continent. This was the first organised attempt at controlling contagious and infectious diseases of animals in Britain. Subsequently, other diseases were dealt with, and the powers of the President of the Board of Agriculture to deal with them were consolidated in various Acts of Parliament, the chief of which was the Diseases of Animals Act of 1894. This Act, together with nine amending Acts of 1896 to 1927, confers the powers upon which State action for the control and eradication of contagious diseases amongst animals is based. The Acts empower the Minister of Agriculture to prescribe the details by administrative orders which have the full force of an Act of Parliament.

The Diseases of Animals Act, 1903 [3 Edw. 7, Ch. 43.], empowered the Board of Agriculture and authorised local authorities to make regulations for prescribing, regulating, and securing the periodical treatment of all sheep by effective dipping, or by the use of some other remedy for sheep scab. The Act also provided for inspection of sheep and gave power to local authorities to provide facilities for sheep-dipping.

Thus before the 'Departmental Committee' had made any recommendations, sheep scab, alone of all the external parasites of sheep, was singled out for special legislative action, and this became the basis upon which all succeeding orders were based.

The Departmental Committee issued its report (Cd. 2258)

in 1904. The report is too voluminous to deal with here in detail, but the main findings may be summarised as follows :—

1. Of all the external parasites, sheep scab was of prime importance, and that measures to control scab would also be effective against the other parasites.

2. Sheep scab could only be controlled by compulsory universal dipping. This finding was given although evidence was led that in New Zealand scab had been eliminated without this drastic measure [4].

3. The Board of Agriculture should authorise each Local Authority in Great Britain to prescribe regulations by which they shall secure once in each year effective dipping of all sheep by a dip recognised by the Board as efficient.

4. The period prescribed for dipping should be arranged by the Local Authority.

5. The Local Authority must provide inspection to see the dipping efficiently carried out.

Recommendations were also made as to the composition of the dipping fluid and as to the type of dipping bath to be used.

Stress was laid upon the number of outbreaks of sheep scab, statistics of which had been made available under the Sheep Scab Orders of 1898. These figures showed that, in the British Isles, there were between 1500 and 2000 outbreaks each year. Unfortunately, no figures were available of the damage caused by the other external parasites. In 1937 such data are still unobtainable.

Upon the findings of the Committee the Sheep Scab Orders have been based. The Orders have been revised from time to time, and the one now in operation was issued in 1928 [5]. The chief points in the regulations for a statutory dipping of sheep in force at the present time may be summarised as follows :—

1. Sheep must be dipped with a dip approved by the Ministry of Agriculture.

2. A Local Authority, under order of the Ministry of Agriculture, may—

- (a) declare its area a double dipping area and fix dates between which the sheep must be dipped ;
- (b) require all sheep taken from another area to be double dipped after arrival and before exposure at a market in their area ;
- (c) require all sheep to be double dipped after exposure in a market in their area ;
- (d) require sheep from certain areas to be double dipped after arrival at any farm in their area ;
- (e) require sheep from certain areas to be double dipped before entry into their area.

3. When sheep are double dipped the second dipping must take place between the eighth and fourteenth day after the first dipping.

4. For the second dipping an arsenical dip must not be used earlier than the tenth day after the first dipping.

5. The sheep must be immersed in the dipping solution for one minute, the head and neck being plunged once or twice.

6. When an outbreak of scab occurs the owner must report it to the local authority.

7. In cases of dispute as to the correctness of a diagnosis of scab the owner has a right of appeal to the Ministry.

8. When a statutory dipping is to take place the owner must give three clear days notice in writing to the local authority stating the place of dipping, the number of sheep to be dipped, and a description of the point from which the gathering of the sheep will commence.

9. The local authority in a "Double Dipping Area" must appoint an inspector to supervise the collecting of the sheep for dipping, and be represented at the dipping.

These regulations, either in whole or part, have been in force for over thirty years, and their effect upon the number of outbreaks of scab can now be considered.

#### RECORDED OUTBREAKS OF SCAB.

The number of outbreaks of scab before the advent of compulsory universal dipping is shown in Table I. for the years 1900 to 1903. These figures show there were almost 2000 outbreaks in some years, the number fluctuating from year to year. The figures given in Table I. for representative periods since compulsory dipping was introduced show that, although there has been a decline in the total numbers, there is still room for considerable improvement. The figures are particularly interesting when we compare them with the results obtained in Australia and New Zealand.

TABLE I.—OUTBREAKS OF 'SHEEP SCAB' IN THE UNITED KINGDOM.

	1900	1901	1902	1903	1928	1929	1930	1934	1935
England . . .	982	757	691	798	307	302	231	491	335
Wales . . .	917	696	779	687	358	308	222	131	102
Scotland . . .	90	104	194	148	79	40	25	62	40
	1939	1557	1664	1833	744	650	478	684	477

New South Wales first introduced compulsory dipping in 1863, and in 1868 the Colony was free from scab. In Victoria, where, in 1862, 50,000,000 sheep were reported to be infested with scab, the progress of extinguishing the disease occupied twelve years. In New Zealand, in 1881, about 700,000 sheep were infested, and the disease was extirpated by dipping by 1893. These figures are very interesting, the more so in that New Zealand did not adopt universal compulsory dipping, but placed the onus of effective treatment upon the owner of diseased sheep. In Britain, after over thirty years of compulsory universal dipping, the incidence has only been reduced to about one-third of the number of outbreaks occurring before the enactment of special legislation. This state of affairs cannot be regarded as satisfactory when compared with the results obtained in the Colonies.

We shall now consider whether our methods of dipping are really effective, and why scab has not been entirely eradicated. Before this question can be answered, we must consider recent important advances made in our knowledge of the life history of sheep scab and in the chemistry of dips.

#### LIFE HISTORY OF SHEEP SCAB

(*Psoroptes communis*, var. *ovis*).

The ultimate success of all dipping operations must be based upon the life history of the parasite to be treated. Sheep scab, as mentioned in the early part of this paper, is one of the oldest known diseases of sheep, but it is only during the last hundred years that the parasite causing the disease has been identified and its life history studied. G. H. Walz [6] first described the mite in 1809, and since that time many workers have reported upon it, the most important being Shilston in South Africa [7] and Stockman in Britain [8]. These writers dealt exhaustively with the aspect which we can now term active sheep scab. A full description of this form by Stockman appears in the 1925 volume of this Journal. This form of scab is easily detected by the naked eye and is easily treated by dipping. Dipping, however, only attacks the mites and has no effect on the eggs, so that dipping must be repeated after the eggs have hatched out and before the newly hatched mites have time to reproduce. The second dipping, therefore, is carried out between the eighth and fourteenth day after the first dipping. There is, however, this further difficulty. The scab lesions may become so encrusted that ordinary dips will not penetrate, and such areas require hand treatment. Hand treatment, however, can only be applied to visible

areas, and, in some cases, small heavily encrusted sores may escape detection for individual treatment and so carry on the disease. This aspect calls for dips with a high power of penetration, the study of which is still in its infancy.

A new and very important aspect has been investigated by Downing [9], who observed some sheep which were heavily infected with scab in the winter, and which were left untreated. They underwent an almost complete recovery during the summer months, only to relapse in the autumn. This form of scab he has called Latent or Suppressed Scab.

In this form the sheep may show no signs of scab, but may still be harbouring mites. The onset of the latent period may begin in February or March, when the mites become dormant and harbour under patches of scurfy skin, in wrinkles of thickened and corrugated skin, in the infra orbital fossae, the inguinal folds, the scrotum of the wether, and possibly the tail. Double dipping will cure this form of scab where the mites are present on the skin, but where they are in the infra orbital fossae, the inguinal folds, and the scrotum of the wether, hand treatment in addition to dipping is required for effective treatment.

It is probably this form of scab which is making the disease so difficult to eradicate. Downing points out that the mites show a tendency to migrate from their places of concealment in autumn, and thus become more accessible to dipping fluids, so that autumn dipping would give a better control of sheep scab than the present summer statutory dippings.

This point should be considered in relation to the number of outbreaks occurring in each month of the year. Table II. gives the average number of outbreaks for each month during the years 1922 to 1924 and during the years 1934 and 1935.

TABLE II.—AVERAGE MONTHLY OUTBREAKS OF SCAB.

Month.	Average 1922-24.	Average 1934-35.
January . . .	173	125
February . . .	84	60
March . . .	40	35
April . . .	22	25
May . . .	13	10
June . . .	11	13
July . . .	8	14
August . . .	12	39
September . . .	16	42
October . . .	45	32
November . . .	77	93
December . . .	147	98

It will be observed that by far the 'greatest number' of outbreaks occur during the winter months, and they fall to a minimum in the summer months of June, July, and August. How far dipping is responsible for this decline has yet to be determined, as the rapid fall in the number of outbreaks occurs before the dates at which it is usual to dip under the statutory regulations. It would appear from this table that climatic conditions are the deciding factors, bringing on true latency, involving the apparent disappearance of all traces of scab. Where we get true latency—i.e., where the mites are harbouring in the infra orbital fossae, the inguinal folds, or the perineum, it is possible these sheep will be passed without the presence of the disease being suspected. If these sheep are sent to different parts of the country, each one is a potential source of a fresh outbreak of scab. When suitable weather conditions return, as in the autumn, latent scab becomes active, and so we get a rapid rise in the number of outbreaks during the late months of the year. It is advisable, under these circumstances, seeing that summer dipping alone has no effect upon latent scab, to alter the time of a statutory dipping for scab to October. These facts as to latent scab and the migration of the mites in autumn were not before the Committee of 1903.

That autumn dipping is necessary has been recognised in the Pennine Range (Movement of Sheep) Order, issued on 23rd February 1934 [10], which came into force on 10th March 1934. This Order controlled the movement of sheep out of the five most dangerous areas in order to prevent spread of infestation, and subsequent orders of May and September 1934 required all sheep in the Pennine Range areas to double dip twice each year, in summer and in autumn. These measures have reduced the number of outbreaks, but the number still remains too high.

It appears from examining the statistics that the present methods of dipping are not doing what is expected of them. A probable cause of their partial failure is that the dips at present in use are all water-soluble, and are readily washed off by rain. The geographical distribution of the outbreaks supports this theory, because the greatest number of cases occur in those places which have a heavy rainfall—e.g., the Pennine Range area, Wales, and the West Coast of Scotland. This may also account for the ready eradication of scab in Australia, where the sheep farms are principally in the drier areas. The use of a waterproof dip would, in all probability, overcome this difficulty.

#### OTHER EXTERNAL PARASITES.

The other important external parasites of sheep are (1) Lice, (2) Keds, (3) Sheep Maggot Fly, (4) Ticks. It is pre-



sumed by the authorities that compulsory dipping for scab will also control these pests. However, maggots and ticks have increased in importance in recent years despite statutory dipping. Unfortunately, there are no statistics available by which we can estimate the total economic loss from these pests, but their widespread incidence and the reported losses from individual farms show that, together with foot-rot, they are now of much greater economic importance than sheep scab. Investigations into these pests have been proceeding at Aberdeen for some years, and the general findings are that the present methods of control are inadequate to deal with them. The reason for this failure is that the present scheduled dippings have little bearing upon the life history of the pests. It has been pointed out earlier in this paper that all successful treatment must be based on the life history of the pest, and the life history of maggots and ticks differs very markedly from that of the mites of sheep scab.

#### THE SHEEP MAGGOT FLY (*Lucilia sericata* (Meig.)).

It is an accepted idea amongst many sheepmen that there are two flies which attack sheep, one in the early summer and another in the late summer and autumn. This belief is due to the appearance of the maggots at different seasons, but experimental work has shown that in this country, with one or two rare exceptions, all sheep maggots belong to the same species. The most satisfactory way to identify maggots is to breed them out and examine the adult flies. Thousands of these maggots have been bred out in certain departments in the University of Aberdeen, and, in every case, maggots taken from sheep have belonged to the green 'Sheep Maggot Fly,' *Lucilia sericata*.

This fly is active from as early as the middle of April until the autumn, depending upon the weather conditions. The ideal conditions for strike are warm, calm weather, with intermittent showers of rain. It is only on very rare occasions that clean sheep are struck; there must be some predisposing conditions in the fleece to attract the fly.

The conditions which have been shown to attract the fly are: (a) the presence of putrefying faeces in the wool; (b) wool rot, brought about by bacterial activity; (c) the presence of pus from suppurating wounds and sores; (d) the soiling of the wool by urine and by pus from foot-rot.

Bacterial activity is necessary to make conditions attractive to the fly, so that treatment with an antiseptic, which prevents bacterial action, produces conditions unsuitable for strike. Ordinary dipping will bring this about as shown by the following experiment. A flock of 300 sheep

was divided into two lots of 150 each; one lot was left untreated and the other lot was dipped in the ordinary way with an arsenical dip. Strike occurred in the undipped group almost daily, and after 36 days 92 of the sheep had been struck. The dipped group remained free from strike until the 15th day after dipping, and between the 15th and 36th days 27 sheep were struck. These figures indicate that ordinary dipping will prevent strike for a period, in this case of just over a fortnight, after which the effect gradually falls away. The protection does not last so long in some cases, because the dipping solution being soluble in water is readily washed off by rain. Cases have been noted where heavy rain fell a few hours after dipping and the sheep were struck four days later. It was to overcome this difficulty that we have evolved a waterproof dip at Aberdeen. This dip, which is an oily emulsion, when used under proper conditions, has given protection against the fly for about five weeks. This has happened only where it was possible to keep the wool free from fæces. When a flock is scouring it is impossible to control strike by any dressing, because the relatively small amount of chemical substance that can be deposited in the fleece will soon be neutralised by a layer of fæces.

The chief cause of scouring, in the North of Scotland, appears to be the presence of large amounts of wild white clover in the grazings, and in one district the increase in blowfly attack can be definitely connected with the introduction of wild white clover. The control of scouring caused by wild white clover is meantime under investigation, and it is hoped to clear up this problem shortly.

Perhaps one of the commonest causes of strike is dipping in a bath where the solution has become grossly contaminated by urine and fæces. Several flockmasters, when discussing this point with the writers, have stated that the first lot of sheep dipped remained free from strike for a lengthy period, depending upon the weather, but those put through the dipper after three hundred or so had been through, were apt to be struck a few days after dipping. Cases have been noted where 1500 to 2000 sheep were dipped in a bath to which fresh solution was added from time to time to keep up the bulk. In such cases, the sheep are not dipped, but just submerged in a fæces emulsion, and emerge with a slimy covering of fæces. This contamination is added to by the drainage from the dripping pens washing into the bath, carrying with it the fæces from the wool and the dung dropped by the animals in the pens. It is a serious loss to clean out a large dipping bath after only 200 sheep or so have been through the dipper, and also to lose the drainage from the dripping pens, but at the same time it is false economy

to go on dipping sheep in what is nothing more than a mud bath.

At the time of the summer statutory dippings, with the exception of about fifty farmers in Scotland who actually have scab among their sheep, the maggot fly and the ked are the only pests to be affected. If, then, the sheep are to be made more attractive for strike by the maggot fly, as is the case when they are dipped in a bath containing faeces, the dipping is not going to be helpful, but is going to be decidedly harmful. This difficulty may be reduced by using a small hand bath, which can be cleaned out after every 150 sheep or so and discarding the drainage. Such a method may appear a reckless waste of dip and entail too much labour in handling, but it is the only way to comply with the present out-of-date dipping regulations and, at the same time, get some degree of protection against the fly.

One alternative method is to wash the sheep before dipping, but this again requires much extra labour. Also most sheep, as soon as they are plunged into a cold bath, evacuate and contaminate the bath. To overcome these difficulties we are, meantime, experimenting with a spraying apparatus by which each sheep is treated with clean dip. The apparatus consists of a spraying chamber into which the sheep is placed, and a portable engine pumping unit with an eighty gallon tank attached. This apparatus has been placed at our disposal by Mr R. Edminson, a chemical engineer of Perth, who has undertaken the engineering part of this experiment. Only two men are required to work the apparatus, one to drive the sheep into the spraying chamber and the other to control the spraying. Working at a pressure of 250 lbs. per square inch, half a gallon of clean dipping solution can be sprayed on to the sheep in twenty seconds. In routine work one sheep can be treated every half minute, and as the engine unit is designed to work two chambers, four sheep per minute can be treated. The whole apparatus is portable, so that in the case of hill farms it can be taken to the sheep. Results obtained by this method, a full account of which is to be published shortly, show that, although it is still in the experimental stage, spraying gives slightly better protection against the sheep maggot fly than dipping, even when the dipping is carried out under the most favourable conditions.

The spraying method of applying an antiseptic solution has definite advantages over the dipping method. Handling of the sheep is reduced to a minimum, and there does not appear to be so great a shock to the sheep. The cold solution gradually soaks the wool, while in dipping there is a considerable shock due to the sudden immersion in the cold liquid.

Hand spraying is very effective against maggot fly, but

great care must be taken to ensure that the most vital parts are treated. These parts are the breech, the under side of the chest, and the shoulders, because it is in these regions that the most favourable conditions occur for strike.

Hand spraying may be done with any horticultural type of sprayer, but we find the most suitable type is the stirrup hand pump fitted with a short length of hose and a lance. With this type of instrument it is easy to spray the breech and under side of the chest. The selection of a dipping solution will be discussed later.

### TICKS (*Ixodes ricinus*).

Ticks are a serious pest to sheep farmers in some districts in Scotland. They not only suck the blood from the sheep, causing loss of condition, but are also responsible for disseminating Louping Ill and Tick Borne Fever [11]. Much valuable work upon ticks and their association with these diseases has been done by Dr Russell Greig and his associates of the Animal Diseases Research Association of Scotland. As this paper is only concerned with that part of the life history bearing upon dipping, the reader wanting a full description of the life history of this pest and of the diseases caused by it should read the papers published by these workers [12].

MacLeod [13] in his survey of tick infestation in Scotland, found ticks established in the Border Counties, Perthshire, and the West Coast. Recently the writers have found that they have become serious pests in the Fettercairn, Glen Dye and Strachan districts of Kincardineshire, and in parts of Deeside in Aberdeenshire.

The pest has two distinct periods during which it attacks sheep, one from March to the beginning of June, and, the second, from late August to October. At other times of the year it remains dormant in the grass. When it attacks the sheep it attaches itself to some exposed part of the body where the wool is absent or very short, and buries its head in the flesh. It remains attached to the sheep in this way until it is fully gorged with blood, which usually takes ten days. It then falls off to undergo further development, and, if an adult female, to lay eggs in the grass.

It is while the ticks are attached to the sheep that they can be treated by dipping. At the time of the usual summer dipping the ticks are dormant, so special dipping must be undertaken.

The best time to dip for ticks has been shown by Mr Lyle Stewart [14] to be in March. Many sheep owners will object to this practice, because this is just before lambing, and there

is danger of aborting the ewes. Experiments conducted by Mr Stewart in Northumberland, however, show that careful dipping has little ill effects even at this time of year. For successful treatment the sheep must be dipped every ten days with the dips presently available, but recently a new dip has appeared on the market which is said to necessitate dipping only every twenty-one days. The approved dips, especially the arsenical ones, will kill the ticks upon the sheep, but they afford no protection whatsoever against further attack.

The tick is dependent upon its host for dispersal, so that it should be possible to prevent the tick from spreading by dipping the sheep immediately before moving from infested ground. There are many other hosts which can carry the tick, but the sheep is the chief one, and it is very important that if clean land is not to be infested, the sheep from infested land should be dipped before moving.

#### KEDS (*Melophagus ovinus*).

Keds are active during the time of a statutory summer dipping, and ordinary dips kill the adults but have little effect on the pupæ. The pupæ hatch out twenty-one days after being laid, so that the double dipping prescribed to deal with scab will not give control of this pest. For complete control the second dipping should take place twenty-one days after the first.

#### LICE.

Both biting and sucking lice are killed with carbolic or nicotine dips. Arsenical dips kill some lice, but are not always effective. The eggs of lice are not killed by any of the dips, so that a double dipping is necessary. In warm weather two dippings, with an interval of fourteen days, are effective, but in cool weather an interval of twenty days, or three dippings at intervals of ten days, is necessary in the case of sucking lice, as they develop slowly.

#### ECONOMIC ASPECT OF SHEEP PARASITES.

No accurate records of the damage sustained through the ravages of the different pests are available. The official returns deal with sheep scab only, give the number of outbreaks, but omit to state the number of sheep affected. Table III. shows the sheep population for each country in Great Britain, with the number of outbreaks of scab.

TABLE III.

	Year.	Sheep Population.	Scab Outbreaks.	Number of Outbreaks per Million Sheep.
England	1934	12,353,486	491	40
	1935	12,199,391	335	24
Wales	1934	4,173,556	131	31
	1935	4,277,609	102	24
Scotland	1934	7,655,476	62	8
	1935	7,766,415	40	5

These figures indicate that, although the number of outbreaks of scab is large, the number of sheep affected forms a very small percentage of the total sheep population.

Unfortunately, there are no figures available by which we can estimate the total loss sustained through the other parasites. A survey by Ritchie and Ratcliffe [15] on the sheep maggot fly showed that very great damage was done by this pest, which is widespread, and losses through its attacks are reported from every district in Scotland, while reports from England and Wales state that it does by far the most damage to sheep of any external pest. The estimated losses on some representative farms are shown in Table IV.

TABLE IV.—SHEEP MAGGOT FLY.

County.	Number of Sheep on Farm.	Estimated Loss through Deaths.
Aberdeenshire	1000 Ewes and Lambs	£104
Argyll	1400 Ewes and Lambs	£150-£170
Mull	900 Ewes and Lambs	£113, 10s.
Wigtown	500 Ewes and Lambs	£11, 5s.
Roxburgh	1200	£25
Berwick	1700	£82, 10s.

This table shows the actual losses through deaths alone, and does not take into account the losses in condition of the sheep. One flockmaster stated that every sheep struck depreciates in value from 5s. to 10s., while another said that any sheep badly affected would lose 50 per cent of its value.

Ticks are not so widespread as the sheep maggot fly, but where they have established themselves great losses are suffered. A survey of the tick pest in Kincardineshire revealed the losses shown in Table V.

TABLE V.—LOSSES THROUGH TICKS. KINCARDINESHIRE FARMS.

Farm.	Number of Sheep.	Estimated Loss in 1935.
1 . . . .	720	£83
2 . . . .	500	£450
3 . . . .	400	£300
4 . . . .	400	£93
5 . . . .	900	£250

These figures were estimated by the farmers from the number of deaths due to tick-borne diseases, and do not take into account the loss in condition of the flock or the extra labour required to dress the sheep. All the farms dealt with in this table are situated side by side, and are representative of the large area affected. When the very large areas in different parts of the country infested by ticks are considered the total losses must be enormous.

It is only on rare occasions that deaths are reported from infestation by keds and lice, but by sucking the blood of their hosts they may cause serious loss in condition.

From the figures stated above, and the widespread incidence of the pests, it is easily recognised that sheep scab, although causing great damage where it occurs, is not nearly so great an economic problem as the other major pests.

### DIPS.

The sheep dips in general use may be classified under four headings: (1) Arsenic Dips, (2) Tar Acid Dips, (3) Lime and Sulphur Dips, (4) Tobacco Dips.

A dip to comply with the requirements of the Ministry of Agriculture must contain, when diluted for use, one of the following ingredients: (1) not less than 0·20 per cent of total arsenic (expressed as arsenious oxide), including not less than 0·13 per cent of soluble arsenic (expressed as arsenious oxide); (2) not less than 0·76 per cent of total tar oils, including not less than 0·36 per cent of tar acids; (3) not less than 18 lbs. of sulphur with 9 lbs. of lime in each 100 gallons of water; (4) not less than 0·1 per cent of nicotine.

On 31st December 1935 there were 306 dips approved for use [16], and these dips were classified as follows: (1) Tar Acid Dips, 210 (12 of which contain varying amounts of arsenic); (2) Arsenic Dips, 91 (49 of which contain varying amounts of tar acids); (3) Lime Sulphur and Sulphide Dips, 4; (4) Tobacco Dips, 1.

These figures show that Tar Acid and Arsenical Dips are by far the most important. Tobacco Dips are effective against all external parasites of sheep, but are too expensive for general use. The Lime Sulphur Dips, although effective against scab mites, are practically useless against all other external parasites.

Tar Acid and Arsenical Dips are effective against all external adult parasites at the time of their application, but being soluble in water are readily washed off by rain. When sheep are confined in buildings the action of dips may last six or seven weeks [9], but in the open fields the antiseptic properties may be lost in three to four days.

It was to overcome this difficulty that experiments were undertaken under the auspices of the North of Scotland College of Agriculture to evolve dips which would withstand the action of rain. Furthermore, few of the dips in use at present have any repellent properties against further attack. A study has been made of the reactions of certain of the sheep parasites to a variety of poisons and antiseptic substances, and it has been found possible to incorporate some of these in waterproof dips.

The basis of a waterproof dip is an oil which will not be absorbed through the skin of the sheep and will not undergo putrefaction in the wool. All animal oils are absorbed to some extent, and vegetable oils, while they are not absorbed so readily as animal oils, undergo putrefaction by the action of the bacteria in the fleece. Mineral oils are not absorbed, and when a suitable grade is used will persist for several weeks. The most suitable mineral oil for use in a sheep dip is a mineral oil similar to that used by manufacturers of 'Brilliantine.' This oil is sold on a guarantee of 99 per cent purity, and is a water-white oil boiling at over 300° C.

The first experiments in the evolution of a new dip were directed to finding an arsenical compound soluble in mineral oil. One new preparation, an arsenical soap, appeared very promising, but it was realised that if a sheep was to be subjected to a prolonged exposure to arsenic, serious poisoning may result, and the arsenical experiments were dropped.

Further experiments showed pale straw-coloured cresylic acid to be the most suitable antiseptic. The tar oils and cresylic acid, when used in a water emulsion, are absorbed by the skin, but when dissolved in mineral oil this absorption is very greatly reduced. The choice of the grade of the tar acid is a very important factor, because an unsuitable grade greatly damages the wool for manufacturing purposes. The presence of asphaltic acids is chiefly responsible for the harmful effects on the wool, and tar oils containing even a small percentage of these substances should not be used. Pale straw-coloured cresylic acid is practically free from asphaltic



acids, and its repeated use in our experiments has failed to show any harmful effect on the wool. Cresylic acid has the additional advantage that it is readily soluble in mineral oils.

Before a mineral oil-cresylic acid solution can be mixed with water it must be emulsified. Emulsification can be brought about by various means, but for a sheep dip ease of preparation must be the chief consideration. Other important factors are the influence of the emulsifying agent upon the wetting and penetrating properties of the dip. After experimenting with several hundred emulsifying agents, it was found the black miscible oil type of emulsifying agent, Whitcol J., was the most suitable. This oil mixes readily with the mineral oil-cresylic acid solution and forms a stable emulsion on pouring into water. The wetting properties of the mixture are increased by dissolving in it crude brown wool-grease. This fat is a similar fat to that naturally present on the wool and will bring the emulsion into intimate contact with the greasy wool.

The formula for one of the waterproof dips evolved by us is as follows :—

Mix together 55 parts by volume of water-white mineral oil, 30 parts by volume of cresylic acid, and 15 parts by volume of crude brown wool-grease, and warm the mixture in a boiler until the wool-grease is dissolved. Allow the solution to cool, then mix together 70 parts by volume of this solution and 30 parts by volume of black miscible oil, Whitcol J. For general use, one part of this mixture should be diluted with 50 parts of water. It is not advisable to use this mixture at a greater strength than one part to 50 parts of water, because the greatly increased wetting power of this emulsion may cause it to have a harmful effect on the sheep if it is used at a greater strength. When it was used at the strength of 1 to 35, the sheep collapsed on coming out of the dipper, but revived in an hour or so and showed little ill effects the next day. This dip has only been tried out for one season and appears to be a great improvement on the ordinary water-soluble dips. Its action appears to last, under ordinary circumstances, for about four weeks.

#### DIPPING AND THE FARMER.

The attitude of the average farmer to dipping is generally one of hostility. The majority of sheep owners consider they are forced by law to take steps to treat a disease which does not exist in their area and, therefore, their efforts are wasted. Several farmers have expressed the opinion to the writers that money spent on dips is money wasted.

This view is, of course, entirely erroneous, but there is some excuse for it, because the official regulations are drawn up almost entirely for scab, and the farmers in question are considering the relation of dipping to sheep scab alone, a disease which is doing them no harm, and not its general application to those other pests which are causing them serious loss and injury. So long as the authorities legislate for the control of one pest alone, the layman will always associate that pest with the measures adopted, no matter what influence the measures have on more important pests.

There can be no doubt that dipping, when properly carried out, controls sheep scab, as instanced by the complete eradication of this pest in some of the Dominions, but in Scotland the small number of outbreaks of scab hardly warrants the continuance in all parts of the country of the present stringent regulations, which have only a partial effect on the other pests. It is quite time that the present regulations should be reconsidered, and that full consideration should be given to the control of other pests, attacks of which are far commoner and cause far more damage and loss than sheep scab.

It is not recommended that stringent regulations should not be enforced where scab is prevalent—in fact, in this case, more stringent measures should be adopted. An area where an outbreak of scab occurs might, for instance, be isolated by a stand-still order as in the case of 'Foot and Mouth Disease,' and the adoption of control measures should be taken over by a central authority. The rest of the country should be de-restricted so far as scab is concerned, and then more appropriate treatment for other pests could be adopted. This would have the effect of making the flockmaster realise that the application of an anti-parasite solution to the fleece is not so much a measure forced upon him by law, as something which is essential for the welfare of his sheep. How far measures for the destruction of sheep parasites should be enforced by law requires further consideration.

There is one regulation which is very necessary in the case of a parasite such as the tick. The sheep is the principal agent for spreading this parasite, and it should be made compulsory that all sheep should be dipped with a suitable dip immediately before being moved from infested land.

#### SHEEP DIPS AND THE MANUFACTURER.

When manufacturers of sheep dips have been asked why they have not evolved new dips for the treatment of maggots and ticks, they have replied that if a dip did not conform to the regulations for a statutory dip for sheep scab, they would be unable to find a market for it. A prospective customer,

no matter what pest he has to deal with, always asks if the dip is an approved dip, and if the dip does not belong to this category he has no use for it. This sheep-scab complex has had a serious inhibitory effect upon research for the evolution of new dips for the treatment of parasites other than scab. It is a mere presumption, which is not borne out by experiment, that dips suitable for scab will control other parasites. Until such time as dips suitable for use against other parasites are approved for use in areas free from scab, there is little incentive for manufacturers to attempt to place such dips upon the market. The regulations have also had a serious effect by retarding the application of recent advances in our knowledge of insecticides and antiseptics to sheep dips.

### SUMMARY AND CONCLUSIONS.

1. The statutory summer dipping of sheep controls the active form of scab, but has only a partial effect on the sheep maggot fly. It exerts little control over any of the other parasites.

2. Summer dipping, taking place in the dormant period, has doubtful effect on latent sheep scab.

3. There are only a few sheep farms in Scotland affected with scab, and these are mainly confined to one limited district in the Western Islands, and another on the mainland. So far as scab is concerned, most of the country might be free from the present restrictions.

4. The reasons why compulsory universal dipping has failed to eradicate sheep scab in this country appear to be (a) failure in certain cases to collect all affected sheep for dipping, (b) the rapid washing off of the dipping solution by rain in a humid climate, (c) lack of power of dipping solutions to penetrate encrusted scabs and hiding places of mites, (d) dipping during the period when the disease is latent. Regulations for dipping for scab should be made more stringent in those areas where scab is still found.

5. When compared with the relatively small number of sheep affected with scab the other external parasites are of much greater economic importance.

6. The sheep maggot fly is the most widespread pest, and statutory summer dipping only partially controls it, even when the sheep are dipped under proper conditions. To control maggot fly, it is essential that the dipping solution should be kept clean. Methods for accomplishing this are described, and the formula for a type of dip suitable for preventing strike for a reasonable period is given.

7. Ticks are dormant during the time of summer dipping

and are not destroyed by such dipping. An efficient dip to control ticks has yet to be evolved, and calls for further experiment. Sheep should be dipped before they are moved from tick-infested ground to clean areas.

8. Keds are not controlled by statutory double dipping because their pupæ, which are unaffected by water-soluble dips, hatch out about a week after the second dipping.

9. Water-soluble dips are readily washed off by rain and lose their antiseptic properties in a very short time. Water-proof dips are recommended.

10. Finally, we desire to emphasise that the law and regulations as to the dipping of sheep require reconsideration and revision in the light of modern knowledge of the external parasites of sheep and of means of controlling them.

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# THE LIBRARY OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

WITH NOTES ON SOME OF ITS CONTENTS.

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## THE INCEPTION OF THE LIBRARY.

ALMOST contemporaneously with the foundation of the Society the idea of forming a Library of the literature dealing with the objects it had set out to promote must have been present in the minds of the founders, for we find in a Minute of 11th March 1789 a "Report of the Committee on Books and Publications." There were present General Campbell of Barbrech, Mr MacLeod Bannatyne, Doctor Gregory Grant, Mr Lesly, and Mr Henry Mackenzie, Convener. The Convener's name was a sufficient guarantee that, from a literary point of view at least, the Library would be well and truly established. Henry Mackenzie, born in 1745, bore for over half a century "one of the most illustrious names connected with polite literature in Edinburgh." His first novel, 'The Man of Feeling,' published in 1771, was immensely popular, and, though little appreciated now, at one time was said to have "attained classical celebrity." He was one of the first men-of-letters to recognise the genius of Robert Burns, and he also befriended Scott, who made ample return by immortalising the author of 'The Man of Feeling' as the dedicatee of the anonymous first edition of 'Waverley.' Mackenzie's services to the "Highland" were many and valuable. He was one of the founders in 1784; he was responsible for the first volumes of its 'Prize Essays and Transactions'; and in 1805 was Chairman of the Committee which issued a much discussed report on the authenticity of Macpherson's 'Ossian.'

Under this august Convenership, therefore, the first Committee to deal with the purely literary side of the Society's work was called together, in consequence of a remit from the Society "to consider of such books and publications on Agriculture and other objects of this Institution as in the meantime they thought should be purchased." The Convener laid before them a list of the books recommended. It may be interesting to examine, after an interval of almost a century

and a half, the selection of such books then available. Here is the list :—

- Young's *Tour*, &c.  
 Wright's *Tour thro' Scotland*.  
*Transactions of the Society of Arts in London*.  
 Dr Anderson's *Agricola*. 3s. Edin. 1777.  
 Knox's *View of the British Empire*. 2 vols. 11s. 1786.  
 Dickson's *Treatise of Agriculture*. 2 vols. 10s. 1770.  
 The Bath Society's *Letters and Papers on Agriculture and Planting*. 2 vols. 11s. London, 1783.  
*Instructions for Cultivating and Raising Flax and Hemp*.  
 Dublin, 1724.  
 Mills' *Treatise on Cattle*, &c. 6s. Lond. 1776.  
 Lord Kames's *Gentleman Farmer*. 6s. 6d. Lond. 1779.  
 Maxwell's *Transactions of the Society of Improvers of Agriculture in Scotland*. 3s. 6d. Edin. 1743.  
 The Dublin Society's *Essays on Husbandry, Trade, &c.*  
 2s. 6d. 1740.  
*Mémoires et Observations recueillies par la Société économique de Berne*. publiées chaque mois.  
*Transactions of the Bath Agricultural Society*, and published occasionally at 5s. or 6s. the volume.

The Committee agreed to recommend that the books named in the list should be purchased, but apparently nothing further was done in the matter for several years, as at the General Meeting of 1st June 1793 it was recommended, on a motion by Dr Gregory Grant, to appoint a Select Committee for the same purposes as were reported favourably upon by the Committee of 1789, with the additional power of publishing 'Extracts from Approved Essays and the Transactions of this Society occasionally for the benefit of the Public at Large.' This was apparently the first move towards issuing the 'Transactions' of the Society, which have appeared without interruption from 1799 to date.

Nearly two years more elapsed before Mr Henry Mackenzie gave in a report to the Directors (22nd May 1795) with a list of books, &c., recommended for purchase, amounting to £9, 18s. 6d., and a further list to be procured at a future period. The list is substantially the same as that recommended by the Sub-Committee of 1789, with several additions, such as :—

- Marshall's *Minutes of Agriculture*. 1778.  
 Adams' *Agriculture*. 2 vols. 1789.  
 Evelyn's *Sylva*. 2 vols. 1786.  
 Mawe's *Gardening*. 1794.  
 Culley on *Live Stock*. 1795.

And among those "to be considered of":—

Statistical Account of Parishes. 1791. .

Brownrig upon Salt. 1784.

Duhamel, *Traité sur les Arbres, les Bois, et les Forêts.*

The Directors approved the Report, but whether all the suggested works were actually procured it is impossible to say. A fair proportion are still to be found on the shelves of the Society, and others may have once been there, but, as is the habit of books, they may have gone wandering and found unlawful homes elsewhere.

The question of the purchase of 'The Statistical Account of Scotland,' the well-known work, for which, as regards the collecting and editing, Sir John Sinclair, Bart., of Ulbster, the founder of the Board of Agriculture, and a staunch upholder of the Highland Society, made himself responsible, and thus laid the future historians of Scotland under a deep debt of gratitude, was considered important enough to bring before the General Meeting of January 1796, when it was decided to acquire the work. Obviously this was done, as the twenty-one volumes are still in the Library.

Again, the importance of the publication of a new work on agriculture in the late years of the eighteenth century is brought home to us when we find that the Society thought it expedient to appoint a Sub-Committee for the purpose of examining a single work on the subject. The General Meeting of 31st July 1797 received a report from such a Committee on James Donaldson's 'Modern Agriculture,' presented by the author to the Society. The Committee agreed to recommend the purchase of four copies for the Library, at the same time informing Mr Donaldson by letter that "there are some passages about agricultural policy and other general points of which they cannot approve, and which they think had better [have] been omitted."

It was not only to works of agricultural interest that the Directors devoted their attention, for Mr Colin Mackenzie brought before them on 11th June 1802 the prospectus of the proposed 'Etymological Dictionary of the Scottish Language,' by the Rev. Dr John Jamieson, and also read a letter from "Mr Walter Scott, Advocate," testifying to the merit of Dr Jamieson and his capacity to undertake the work. Again a Sub-Committee, including Lord Woodhouselee and Mr Henry Mackenzie, was appointed to advise on the question of purchase. The Directors received the Sub-Committee's report on 7th January 1803, and suggested a contribution of twenty guineas for a copy, which was agreed to at the subsequent General Meeting. The same meeting of Directors authorised "Mr Henry Mackenzie, Mr Jardine, and Mr Tait, or any two of them, to conclude a bargain with Mr Laing,

bookseller, relative to the purchase of the Scotch (*sic*) magazine." The bargain was duly concluded, and the periodical for the years from 1739 to 1780 changed hands for the sum of £12, 12s. The subsequent volumes were added as they appeared, and so the Society possesses the complete set of the 'Scots Magazine' from 1739 to 1826. The bookseller referred to was the famous antiquary, David Laing, who for over thirty years was librarian to the Signet Library, Edinburgh, and was honoured by Edinburgh University with the degree of LL.D.

By 1809 the Directors, having evidently acquired more confidence, recommended, without the formality of appointing a Sub-Committee to consider the matter, that the Society should subscribe for ten copies of Dr Rennie's work on Peat Moss, a recommendation duly agreed to at the General Meeting of 26th June of the same year. By this time the Library must have grown considerably, as, at the next meeting of Directors, the Deputy Secretary was instructed to make a list of all books and publications belonging to the Society, and that official duly reported on 17th November that the catalogue had been drawn up. At the same meeting a letter was read from the Secretary of the Bath Society intimating the gift of eleven volumes, being a complete set of that Society's published 'Transactions'—the first intimation of the willingness of kindred associations to exchange their publications. A letter was also intimated from Sir John Sinclair announcing the presentation of several printed communications from the recently formed Board of Agriculture. These included :—

An Address of Mr Secretary Young to the Board,  
An Account of Merino Sheep presented to His Majesty  
obtained from the Spanish Shepherds,  
and a list of the Premiums offered by the Board for 1809.

#### Gaelic Dictionary.

A Committee on the publication of a Gaelic Dictionary had been formed by December 1809, and had considered the proposed publication of such a work by Mr Daniel Dewar, to whom, no doubt with the prospect of the Society publishing its own dictionary in view, countenance and support were refused. However, it was recommended that, should Mr Dewar succeed in publishing his work, several copies should be subscribed for by the Society. The same meeting recommended that a subscription of twenty guineas should be paid for two copies of Irvine's 'Lives of the Caledonian Bards.'

The project of publishing a dictionary of the Gaelic language which might be recognised as the standard authority on the subject had been considered from the very early years



of the Society one of the most important steps towards furthering intercourse with the people of the Highlands, among whom only a small proportion at that time could speak or understand the English tongue. This project was the incentive to collecting either by gift or purchase printed books, which were then few in number, and manuscripts in Gaelic. Hence there is to be found in the Library to-day a small but interesting collection of these printed volumes. The manuscripts which had been got together were, at a later date, handed over to the Advocates' Library, Edinburgh (now the National Library of Scotland). The most important of these were catalogued and are recorded in the volume compiled by Professor Donald Mackinnon in 1912. Probably the most interesting of the Gaelic books is the first edition of the Old Testament, four volumes (bound in two), published by William Smellie, Edinburgh, 1783-1801.

After fourteen years of exacting and painstaking work by the Committee responsible, the Dictionary was issued in 1828 in two quarto volumes, bearing the title 'Dictionarium Celticum: a Dictionary of the Gaelic Language.' It contains two vocabularies: the first, Gaelic, English, Latin; and the second, Anglo-Gaelic. Although later dictionaries have been published, none has been attempted on so elaborate a plan, and the work has served generations of students of Gaelic to a degree comparable with the service rendered to English-speaking people by Dr Johnson's *magnum opus*. It has still to be superseded as an authority for researchers into the history of the Scottish Celtic tongue, and stands as a monument to the efforts of its compilers, unequalled by any Society not devoted to purely philological activities.

#### PAMPHLETS.

The Directors, on 2nd February 1810, authorised the Committee on Publications "to have any valuable printed papers or communications in the possession of the Society bound up for preservation." This foresight has been responsible for an interesting collection of pamphlets which forms one of the features of the Society's Library. Those which have already been bound are contained in twenty-eight volumes and date from 1810 to 1840, after which date the work of collecting and binding the pamphlets had been allowed to stop. There are, however, a large number of separate pamphlets of later date, which have now been recorded and will be bound up to continue the collection up to recent times. These twenty-eight early volumes contain some 400 items, but the arrangement, when any was attempted, was not methodical, and consequently for the best part of a century their interesting and sometimes valuable information has been almost impossible

to locate. However, they have now been catalogued and indexed. A goodly proportion of the pamphlets naturally deal with subjects either directly or indirectly connected with agriculture, and of these, it may be mentioned, many do not appear to have been recorded in any bibliography of works on agriculture. Some of the items, indeed, are probably unique.

One volume in particular deserves this description. It contains no fewer than eighty-four printed pamphlets setting forth the laws or rules of various Friendly Societies. They date from 1796 to c.1822, and must have been gathered together when the Society was conducting an inquiry into the working of these benefit societies. Nearly all parts of the country are represented, and even France has an example in a set of rules from a Paris society. One curiosity, in which all the rules, including the amounts of payments to be made by members, are set forth in *rhyming couplets*, hails from Musselburgh.

An Edinburgh periodical, which has not been traceable elsewhere, appears in another volume. It is entitled 'The Beacon Light, or Occasional Researches in Politics, Morals, Literature, &c.' It would seem to have been unusual among periodicals in that it was not intended that issues should appear at regular intervals. Indeed the Editor made this quite clear: "It appears one of the most striking disadvantages of periodical works that they are published at precise and fixed periods. . . . The mind cannot in general with advantage be goaded to the production of a precise quantity of letterpress (within a given time)." In this collection the first four numbers are extant. They appeared between August 1810 and January 1811, and in all likelihood no others were issued. The motto it adopted was "*seria mixta joci*," and consequently it attempted both to edify and amuse. Among other articles it contains: "A Summary View of the British Constitution: Reflections on Emigration" (in which the writer laments the draining of the Highlands of Scotland of men who made such capital soldiers, capable of being used against the usurping Bonaparte), and a letter from "A Sailor" advocating the adoption of the ballot instead of the press-gang for filling the ranks of the Navy. There is also a poem, in light vein, "The Wiggins: a Tale of Yesterday," describing a fire which destroyed a number of official wigs, and inspired the poet to make merry over the plight of the Lords of Session, and others, in having to appear without their usual head-coverings. One paragraph of a practical nature may be of interest to agriculturists: "The following simple remedy against the depredations of *mice* in corn stacks has lately been recommended for its undoubted efficiency. Sprinkle from four to six bushels of dry white sand upon the roof of the stack before the roof is put on. The sand is no detriment to

the corn, and stacks thus dressed have remained without injury. So very effective is the remedy that nests of dead young mice have been found where the sand has been used, but not a live mouse could be seen ! ”

### STEAMSHIPS.

Another pamphlet, which must be of some rarity, is entitled ‘Observations on the Utility of Applying Steam Engines to Vessels,’ &c., by Henry Bell, Glasgow, 1813. The author, described in Chambers’ ‘Biographical Dictionary’ as the father of steam navigation in Europe, after displaying an intimate knowledge of the history of ancient navigation, proceeds to describe *The Comet*, the first steamship to be used for practical purposes. He writes : “ In the year 1812 I built a vessel 40 feet long, 10½ feet beam, and hold 8 feet deep, which I fitted up solely for passengers. . . . Next to the cabin is an apartment of 12 feet 6 inches in length by 10 feet 6 inches in breadth, in which the engine and machinery are placed. . . . The vessel has been running between Glasgow and Greenock for six months past, and is found very commodious for passengers . . . the engine is a small portable one of only three horse-power.” “ *The Comet* did the run of twenty-six miles in four and a half hours, with ease in ordinary weather, but,” the builder goes on to say, “ a vessel of her size would require an engine of five horse-power by which she could run the distance in three and a half hours. The above vessel is the first that ever answered the purpose. It (the engine) goes as well when the vessel is tossed with a heavy gale as in a calm. This has been experienced for *The Comet* . . . has run between the Island of Bute and Greenock in very stormy weather with high seas, which is known to be a more dangerous passage than out in the open ocean.”

Another on a naval subject is ‘Steam Navigation and Invasion of Great Britain,’ by D. Maclean. Published twelve years later than Bell’s account of *The Comet*, it serves to show how rapidly the art of mechanical propulsion had advanced in the interval, since the author expresses apprehension lest a descent should be made on our coasts by “fast French steamships if it happened at any time that our Navy had been blown out to sea by strong gales.” Apparently the proverbial unpreparedness of the British Government is not a matter of only recent date !

### PEASANTRY OF ULSTER.

As has been already indicated, the majority of the pamphlets deal directly or indirectly with agriculture, and that the influence of the Highland Society had spread beyond the bounds

of Scotland is proved by the publication in Belfast, in 1825, of a small brochure by A. MacDougall, with the title 'A Plan for Improving the Condition of the Peasantry of the County of Antrim.' The plan was, we read, "the formation of a Farming Society on an extensive scale, and liberal principles, and on a plan similar to that of the Highland Society of Scotland." Among the suggested activities were the encouragement of "the manufacture of coarse garments for the peasants' and labourers' clothing," but the 'coarse garments' were later modified to "cheap and comfortable dresses for the peasantry and labourers and likewise for male and female servants"; "the general improvement of the county and to hinder nuisances and other obstacles on the road." Another suggestion was to encourage 'cattle-doctors,' and the cultivation of useful herbs for curing cattle, such as rosemary, rue, balm, &c., forty-one different remedial plants being detailed. Then premiums or prizes were to be awarded for "the best and most approved schoolmaster or school mistress of each parish"; also for "the cleanest and cheapest country butcher and baker," and for "the constable, peace-officer, or other person who prevents or detects cock-fights, ball-playing, and all irregularities on Sundays, or at other times, such as bullet-playing, &c., on the public roads." 'Bullet-playing' seems actually to have meant the innocent game of 'marbles,' although it sounds like something which would strike very near the heart of the typical Irishman.

#### M'ADAM ON ROADS.

In its early days the question of roads occupied the constant attention of the Society. This was, of course, only natural, as it was realised that the most clamant need of the Highlands at the time was the establishment of better means of communication with the more prosperous south country, and one booklet to be found among the bound pamphlets may be considered epoch-making—viz.: 'A Practical Essay on the Scientific Repair and Preservation of Public Roads,' presented to the Board of Agriculture by John Loudon M'Adam, Esq., 1819. The author, besides revolutionising the art of road-building, added a new word to the English dictionary, but now the dignified 'macadamised' has degenerated through the exigencies of modern improvement and haste to the crude and ill-sounding 'tar-mac.' The main contents of the pamphlet are technical, but it is interesting to read the author's instructions for the preparation of his road-metal, and compare the operation with that of modern mechanical contrivances: "The only proper method of breaking stones," writes M'Adam, "both for effect and economy is by persons *sitting*. The stones are to be placed in small heaps, and women, boys,

and old men past hard labour must sit down with small hammers and break them, so as none shall exceed six ounces in weight"; and again: "Breaking stones has been reduced in price by the use of more proper hammers and the sitting posture. The Commissioners of Bristol used to pay fifteen pence per ton for limestone . . . broken to the size of twenty ounces; now the same stone is procured broken to six ounces for 10d. per ton." The author goes on to say that the labourers prefer the new method, as whole families can be employed together. Consider the benefit to the road contractors too! Fivepence per ton saved by the work of the women and children! And there are still some people who sigh for the 'good old days'!

#### GAS LIGHTING.

In the early years of the nineteenth century the possibilities of the use of gas as an illuminant were arousing keen interest among the people of Scotland, and we find among the pamphlets preserved by the Society a circular issued in 1824 by the Edinburgh Oil Gas Light Company (incorporated by Act of Parliament). The Chairman was no less a personage than Sir Walter Scott, Bart., of Abbotsford, and the Directors begged leave to announce to the inhabitants of Edinburgh that "they will be ready in November next to supply them with a Light which for brilliance, cleanliness, and economy has not yet been equalled." The company was apparently being run in opposition to the Coal Gas Company, and the circular takes great pains to prove from the testimony of experts that oil gas is the superior illuminant. The cost was to be 40s. per 1000 cubic feet, in addition to a charge of 8s. per annum for the use of the meter, which, compared with the present charge of 2s. 9d. for the same quantity, seems exorbitant; and as only 20 feet of piping were supplied free, the cost of installation must have meant a considerable outlay to the consumer. A great saving, in comparison with the use of candles, is, however, promised, and the company did not wish to encourage extravagant use of their commodity, for they had a note to the effect that a burner, giving a light equal to that of six candles, could be used daily from dusk till nine o'clock at a cost of 37s. 6d. per annum. The hour suggested for 'lights out' seems to indicate that a change has since taken place in what might be considered the appropriate time for decent citizens to retire.

#### THE NATIONAL MONUMENT OF SCOTLAND.

There is, standing upon the Calton Hill, Edinburgh, an unfinished edifice which has been variously described as

'Scotland's Folly' or 'a magnificent failure,' according to the point of view of the beholder. It is the much-discussed national memorial described in a pamphlet in the Society's collection, with the title 'The National Monument of Scotland, H.M. the King Patron and Founder,' printed by James Ballantyne & Co., 1822. This authorised publication gives an account of the inauguration and origin of the monument, and a graphic description of the proceedings at the laying of the foundation stone. The ill-fated project was launched with a brilliance that should surely have presaged a happier outcome. To quote from the pamphlet: "The day was propitious, the attendance of Masonic Brethren numerous beyond all precedent, and the company grand, solemn, and imposing in the highest degree. Guns thundered from the Castle, from batteries which had been placed on the Salisbury Craigs, on the Calton Hill, and from the squadron in Leith Roads." This short official history should also remove all haziness from the minds of those who seek to impart to inquiring visitors the real import of the memorial. It was not intended to commemorate the victory of Waterloo, though, doubtless, the then recent military and naval successes were indirectly responsible for the mentality of its sponsors, but the true purpose of the monument is inscribed on a plate of gold, hermetically sealed in glass, deposited in a cavity in the foundation stone. The inscription reads:—

In the Glory of God  
IN HONOUR OF THE KING  
FOR THE GOOD OF THE PEOPLE  
THIS MONUMENT,  
THE TRIBUTE OF A GRATEFUL COUNTRY  
TO  
HER GALLANT AND ILLUSTRIOUS SONS,  
A MEMORIAL OF THE PAST  
AND INCENTIVE  
TO THE FUTURE HEROISM OF  
THE MEN OF SCOTLAND,

Was founded on the 27th August 1822 in the third year of the glorious reign of George IV., under his immediate auspices and in commemoration of his most gracious and welcome visit to his ancient capital and the palace of his ancestors, the celebrated Parthenon of Athens being the model of the edifice.

More interesting perhaps to the members of this Society is the inscription on another plate (of silver) which at the same time was deposited in the foundation stone :—

“ The proposal for erecting this National Monument originated at the Anniversary Meeting of the HIGHLAND SOCIETY OF SCOTLAND, held on the 9th of January 1816, on a motion made by Michael Linning, Esquire, of Colzium, seconded by the Right Hon. Robert Dundas of Arniston, His Grace the Duke of Buccleuch and Queensberry being President at the time.”

Surely few schemes originated or supported by the Society can have come to so unfruitful an end, and yet have left behind so magnificent a reminder of their failure !

### SOCIAL CONDITIONS.

The subject of the social conditions of the working classes always bulks largely in the considerations of a society existing to further the improvement of the people, and the period following the French Revolution was one which was particularly productive of activities on the part of men who were looked upon by their opponents as merely agitators. As newspapers were at that time very few in number and available only for the wealthier classes, the pamphlet became more and more a means of airing grievances and suggesting reforms. On the one side, the people who believed themselves to be true friends of law and order, took the opportunity of impressing upon the working classes of the country how really well off they were and how contented they should be ; on the other, the advocates of the so-called ‘ Rights of Man ’ tried to persuade the ‘ lower orders ’ that they were being tyrannised over and exploited by the employers and land-owners. A number of pamphlets on both sides is included in the collection, and one only need be mentioned as representative of the others. Its title is ‘ Letters, etc., from Friends of the People, or the Last Words and Dying Advice of a Weaver to his Children ’ (price 1d.). Contrary to one’s expectations, it is all on the side of law and order. It opens with a letter “ To the Editor of an Edinburgh newspaper,” which is dated from Glasgow, 10th December 1792 ; and the author, after confessing that he has been too much occupied with his business affairs to hear of such things as distress and want, goes on to say : “ If there *are* any grievances, we have reason to be thankful that they do not affect the manufactures of this city [Glasgow], which I am glad to assure you are flourishing and prosperous beyond all example.” Then follows a description of the death of his father, a working

weaver, whose last breath was expended in exhorting his family to *honesty, sobriety, and industry*; and the writer proceeds: "I have, Sir, by my *honesty, sobriety, and industry*, by minding nothing but my own business and going to no idle meetings, made a sum of money, which, if it had been mentioned to my father, he would have begun to talk about the immense riches of the Duke of Marlborough. . . . If there is any honest man about your city of Edinburgh who is out of employment, and who is willing to work (for *that* is absolutely necessary), bid him come here with his wife and children, for we have employment for infants of eight years old." Then he has his 'dig' at Edinburgh: "One thing, however, I must mention. I am told that you Edinburgh people are all scholars, and understand Greek and Latin, and all that. Now when we get a journeyman weaver who is fond of hearing himself talk, or as we call it 'palaver,' we immediately desire the foreman to turn him out at the door. . . . Here we live by our *hands*. . . . I am, Sir, your humble servant, A Manufacturer." Here is surely a noble example of honesty, sobriety, and industry rewarded—a Glasgow manufacturer making a sum of money which would have staggered his old father, who had given up the ghost from a pallet of straw, by the exalted principle of minding only his own business, assisted by the labour of infants of eight years old!

#### THE WRECKERS.

A grave abuse of the period was the plundering of wrecks, and one small pamphlet brings home the prevalence of this evil, and probably did something to induce the Government to establish a stronger coastguard to endeavour to stop the practice. At all events, the author's views were brought before 'the powers that were,' and he was duly thanked for his communication. The title-page reads: "Remarks on the Plundering of Ships when wrecked on the Coasts of the United Kingdom, and a Mode pointed out of Preventing the same. Addressed to the Committee of Lloyds' by their devoted servant James Brown, Navy Pilot, 1817." Captain Brown's mode of prevention was, shortly put, to use organised force against unorganised delinquency. He substantiates his argument by briefly relating an adventure against would-be despoilers, in which he took part: "Not many years ago at the Island of Islay a vessel, bound for Dublin, was lost on the rocks, in the Sound; and after securing all her cargo and wreck that could be saved in the storehouse of Mr<sup>r</sup> John Hill, Port Askaig, and putting watch upon the vessel, I went with Mr Hill to his house, where we were but a short time when a watchman came to inform us that a number of persons



had assembled from Jura, etc., and were plundering the wreck, where were assembled about thirty persons. We had neither swords, nor firearms, but a good oak stick each, which Mr Hill, the watchman, and myself made the best use of, and in a short time put the robbers to rout. This happened in the night time and in the winter season." How much could the ready pen of a Scott or the artistry of an R. L. S. have made of this incident !

#### AGRICULTURAL LABOURERS.

Among the pamphlets of a somewhat later date than those already mentioned is one which throws an interesting light on the conditions under which the agricultural labourer in England existed in the middle years of the nineteenth century. It is a reprint of 'A Second Paper on British Agriculture with an Account of his own Operations at Tiptree Hall (Essex), read before the Society of Arts, Manufactures, and Commerce,' by J. J. Mechi. 11th December 1851. Mr Mechi was an Alderman of the City of London, and, needless to say, farming was not his only means of livelihood. He wrote a book on his hobby called 'How to Farm Profitably,' which by 1864 had reached a fourth edition. According to his own showing he was a philanthropist, and an agricultural pioneer, farming his own lands at Tiptree with the aid of all the latest improvements. His book-keeping must have been elaborate for his time, and he made up regular balance-sheets. Though most of these showed a loss on the year's working, the *farmer* was requested not to worry unduly about that, for the Alderman was not really trying to make a profit. He was expending money for charitable and other reasons, which the agriculturist who was dependant on his land need not do. But it is a balance-sheet drawn up on behalf of one of his farm labourers which attracts the attention of the curious, and a copy of it will be found on the opposite page.

The reader will observe that this, like his other balance-sheets, shows a deficit which leaves his poor labourer £1, 17s. 7d. in debt for the year. The author dismisses this with the observation : " From the above statement, which I believe to be strictly accurate, it is quite clear that unless the wife earns more than the sum I have stated they cannot have the comforts I have described." The only thing which seems to us, at this time of day, not *quite* clear, is what the ' comforts ' were which the labourer could deny his household in the event of his wife and family not being fortunate enough to earn a little more by assisting Mr Alderman in his scientific farming ! To do him full justice, however, it must be recorded that he says : " Those with large, young families . . . are much to be pitied."



project was carried out after his death and the proceeds utilised for the benefit of his widow and daughters.

### MACHINERY PAPERS.

The instructions of the same meeting of Directors as authorised the binding up of the pamphlets were responsible also for an interesting volume which bears the title of 'Machinery Papers.' These papers are mostly in manuscript and number about 170. Apart from the interest of many of them for students of early attempts to solve agricultural and mechanical problems, they serve to indicate the warmth of the encouragement being extended by the Society at the time to the efforts of Scottish inventors. The Directors appeared always ready and willing to devote their time to examining the models submitted, to authorise trials of implements, &c., and to award monetary and other awards to those whose exhibits bore promise of success. Most of the papers belong to the period 1820-30.

### PATRICK BELL'S REAPER.

In the 'Transactions' of 1928 appears an interesting contribution entitled "Patrick Bell and the Centenary of the Reaping Machine." by Professor James Hendrick, in which the Professor clearly establishes the fact that Bell's machine was a working proposition before the advent of the American invention by M'Cormick, which was generally acclaimed as the pioneer of mechanical reaping, and here in this volume of collected papers is to be found an original letter of Patrick Bell's describing the operations of his machine. It is addressed to J. G. Dalryell, Advocate, Edinburgh, with the object doubtless of its being submitted to the Society. As a first-hand account of the very earliest efforts of harvesting under mechanical conditions some extracts from the letter should prove worthy of recording :—

MID LOCH, BY DUNDEE,  
21st October 1830.

"Having now finished our third season with the Reaping Machine I take the liberty of writing you an outline of our proceedings, being assured that the information I have to communicate will not be unacceptable to you.

"This season, like the last, has been very unfavourable to our operations [on account of the wetness of the season]. . . . Things, however, have turned out much better than I anticipated.

"As far as I can learn thirteen machines have been started in different parts of the country this season—the greater

part of them, however, being but newly constructed—and as often happens in those cases—and as bad luck would have it—they were not got ready until the harvest was well commenced—the consequence of such a delay was that before they were properly adjusted and the men and horses had their apprenticeships served the harvest passed over without their proprietors being much bettered by the use of their machines. But altho' there has not been much done with them further than experiments, as far as I can learn they have universally given satisfaction and convinced their proprietors and neighbours of their utility so much so that they are already forming their plans for next year's proceedings with a view of being bettered by their use. . . .

"I beg leave to give you a statement of the work of two of them which were wrought under my observation. The one of them wrought upon my Father's farm and the other upon my Brother's in the parish of Tealing. . . .

[Follows a tabulated statement of the work accomplished by the machines on both farms.]

"You will observe by this statement that the average quantity my Father cut in the hour was as nearly as possible half an acre, my Brother somewhat more being 2·16 roods. . . . With regard to the number of hands employed I may mention that when the machine is cutting only in one direction as it did generally this season seven people are sufficient to do the work, one to manage the horses and machine, and six to collect, bind, and stook. On a farm such as my brother's he requires three men and two women to do his farm work throughout the year. Besides these five he had this season another five hired for the harvest work. These were girls at 35s. each—that is, £8, 15s., which, with his account for maintenance, was his harvest expenses . . . putting all together his expenses for cutting 60 acres cannot be more than £12—at the usual rate you are aware it would have cost him £30 or £36 . . . hence the saving by the use of the reaping machine is obvious. . . .

"In short, altho' it is rather indelicate for me to say, I have no hesitation in stating that when the machine is rightly constructed and well managed she will cut almost any kind of crop—whether standing upright—laid in one direction—or lodged, in a manner that might satisfy any agriculturist."

Accompanying the letter is a manuscript description of the model of the reaping machine in Bell's handwriting, and preserved in the volume are two 'certificates' testifying to the efficiency of the machine, both signed by a number of leading agriculturists of the districts where the trials had been witnessed. The first (which is referred to by Professor Hendrick) was signed at Powis, Forfarshire, 10th September 1828,

by the Hon. William Maule of Panmure, M.P., and thirty-eight others; and the second at Greystone, in the Parish of Monikie, on the 16th of September 1829, by twenty-three lairds, farmers, and others. It is noteworthy that those of the signatories who were members of the Highland Society indicated this after their signatures.

Even earlier reapers are recorded in this interesting collection, as we find descriptions of one invented by John Common, Denwick, 1812, another by James Kirkwood, Tranent, 7th December 1825, and another by Andrew Jackson, Torphin, 23rd October 1826; but these would appear to have proved less successful than Bell's.

To indicate the ground covered by these efforts of the ingenious which are recorded in this volume of Machinery Papers, the subject-matter of a few others may be mentioned in passing. They include suggestions for a fire-engine; a new design for a milestone; a machine for consolidating land (by the Earl of Strathmore); a double cheese-press; a portable thrashing machine; an improved lime-kiln; a life-saving suit (for persons shipwrecked); new devices for sailing-ships; improved ploughs, harrows, and other agricultural implements; and, of course, 'the perpetual motion.'

### THE SCREW PROPELLER.

A letter in the same collection by Robert Wilson (1828) gives an account of an invention which was destined to revolutionise the mode of steamship propulsion—the device of applying screw-propulsion to vessels in place of side paddles; and it is interesting to find among the pamphlets of a considerably later date one with the arresting title of 'The Screw Propeller: Who Invented it?' by the same writer (Glasgow, 1860). A cursory glance at the contents of this illustrated brochure of forty-seven pages is sufficient to establish its author as the undoubted pioneer in the exploitation of screw-propulsion. The claim is upheld in an unassuming way, and for a publication of the kind is remarkably dignified, and one might almost say uncontroversial. The story of unrequited merit and unrecompensed endeavour has an element of romance which makes it good reading even for the layman, and it stands to the credit of the Highland and Agricultural Society of Scotland that it gave the first practical encouragement to the inventor. This help is gracefully acknowledged in the dedication of the pamphlet, which reads:—

"To the Royal Society of Arts and the Highland Society of Scotland, the earliest encouragers of my efforts to introduce the screw-propeller, I dedicate the following pages in testimony

of profound respect, and of my humble appreciation of their invaluable aid in the cause of science.—ROBERT WILSON."

The facts, briefly, are these. Robert Wilson, born at Dunbar, East Lothian, was, as he describes himself, a working lad when he first conceived the idea of the advantages of propelling paddles placed at the stern of a vessel over those placed at the sides. For some years he turned the matter over in his mind, and, taking his ideas from the practice of sculling, at which he was expert, and from the action of windmills and water-wheels, he at last constructed a 'minor model' with which he experimented between the years 1812-1825. A larger model was then constructed, and in 1827 the inventor was introduced to Mr James Hunter of Thurston, President of the Dunbar Mechanics Institute, of which Wilson was a member, and through him to the Earl of Lauderdale, who, after receiving from his son, Captain the Hon. Anthony Maitland, R.N., commander of the *Glasgow* frigate, enthusiastic reports of experiments with the model, brought the matter under the notice of the Lords of the Admiralty. Their Lordships, however, declined even to witness experiments with the model. Mr Hunter, however, still confident of the importance of the invention, did not relinquish his efforts. He prevailed upon the Highland Society, of which he was a member, to order a trial on a large scale. A Sub-Committee was appointed, which recommended that a sum of £10 should be allowed to Mr Wilson "to get paddles or propellers made on a large scale, with corresponding machinery to be applied to a boat which should be tried in Leith Roads."

An extract from a report informs us that most of the Committee, with the addition of Commissioner Ferrier, Vice-Admiral Sir David Milne, and other members of the Society, attended at Leith in April 1828 to witness the experiments by Captain Donaldson Boswell, R.N.; Captain Trotter, R.N.; Mr M'Pherson Grant; and Mr M'Donald, Secretary. No engine was installed for the purpose of the experiments, the motive power being supplied by "Mr Wilson and two men to work the machinery." Under weather conditions so boisterous that none of the Leith pilots could be induced to accompany the experimenters in any of their boats with either sails or oars, the trials were eminently satisfactory, and Mr Wilson was duly awarded the £10 recommended (his expenses had amounted to over £20, besides travelling and other outlays), but with the proviso that the original model should be handed over to the Society. The inventor apparently did not dispute the justice of this request, but "felt astonished and deeply grieved" at having to give up the model, which he did with the "greatest possible reluctance."

Following the lead of the "Highland," the Society of Arts

for Scotland (later, the Royal Scottish Society of Arts) took up the invention of Robert Wilson in 1832, and after witnessing trials and receiving a favourable report from the Sub-Committee appointed to examine its possibilities, awarded a silver medal to the inventor, which bore the following inscription: "To Robert Wilson engineer Edin' for his Stern Paddles for propelling vessels the Society's Silver Medal value 5 sovereigns—awarded 1832."

As to the priority of Wilson's invention there can be no doubt, as it was not till 1836 that Mr F. P. Smith, a farmer, of Hendon, Middlesex, whose attention had first been called to the possibilities of screw-propulsion in 1835 by three Irvine gentlemen, took out a patent for an 'improved' propeller. Mr Smith was more fortunate than his predecessor in that he was able to obtain ample financial backing, and was thus able to patent the result of his labours, though he did not appear to claim the merit of originating the idea.

Captain John Ericsson, a Swede, also took out a patent in 1836, and, although the priority of his invention could not be maintained, he received a fifth share of £20,000 given by the Admiralty for it. It was not till 1845, however, twelve years after finally rejecting Wilson's model, that the Naval Lords definitely accepted the principle as elaborated by F. P. Smith and Captain Ericsson.

Though doubtless disappointed at the lack of public recognition, Wilson accepted his fate very philosophically, as a passage from his pamphlet indicates: "I now look back to the experiments at Leith with any feeling rather than that of repining. To them I am inclined to attribute much of my after success in mechanical pursuits. The first step to my present position may be said to have been taken at the time of making the experiments at Leith, as, while fitting out the boat there, I was introduced to Mr Nasmyth . . . who, twelve years afterwards, engaged me to take management of the works, in which I succeeded him as acting partner."

#### STEAM LOCOMOTIVE.

Still another paper introduces an invention which under more favourable opportunities might have brought its deviser world-wide recognition in the field of land travel. It bears no date, but, being bound into the volume among papers relating to the year 1829, may be put down as belonging to that year. It describes:—

"A new steam carriage invented By Peter Elder one of the workmen employed by Messrs A. Macfarlane & Co. Perth Foundry the carriage is 12 inches long by 6 inches broad the boiler is tubular and the engine works horizontally having a 2 inch stroke the carriage is so constructed as to revolve in

a circle or along a straight line as occasion may require as the engine is so extremely simple it will not be so easily deranged and is equally applicable to railways or turnpike roads if extended to a sufficient size the carriage is set a going by means of a spirit fire and has been inspected by a number of imminent engineers and gave them great satisfaction."

It is to be noted that George Stephenson's locomotive engine 'The Rocket' performed its first official trial on the Stockton-Darlington Railroad in the same year, 1829.

MANUSCRIPT OF JAMES WATT'S SURVEY FOR CANALS  
AT CRINAN AND TARBERT.

James Watt, the celebrated engineer, whose name is associated in everyone's mind with the improvement of the steam-engine, had many other claims to recognition in the realms of mechanical invention and practical science. For a time his bent seems to have been in the direction of civil engineering, and his services were frequently employed in surveying routes for proposed canals; and as those means of communication particularly interested the Highland Society, it is understandable that a manuscript by him should have been rediscovered among the Society's papers bearing on the subject. The document in question is in the author's holograph, written on 109 pages of a small 4to note-book, and subscribed "Glasgow, Decr 21st 1772, James Watt." In January 1773 the Society had remitted to Mr George Clerk Maxwell to report on the survey, and his findings, which are favourable and complimentary, are appended to the original document.

That the survey was originally undertaken at the instance of the 'Board of Annexed Estates' is shown in Watt's preamble, which details the instructions given to him by that body, and the Society's continued interest in the matter is proved by the reference to it in the 'Prize Essays and Transactions' by Henry Mackenzie, Vol. I., 1799. From page xxxvi the following is extracted:—

"The practicability, and expediency, of a navigable communication through the isthmus of Kintyre, from Loch Gilp on the east, to Loch Crinan on the west, was mentioned in a letter to the Society from the late Lord Salton in 1787, and was afterwards frequently brought under its notice by the late Sir John Clerk of Pennycuik, and his uncle Mr Clerk of Eldin, both zealous in every object of national improvement, particularly in any which relates to the Highlands. On the motion of the former at a General Meeting on the 10th of January 1792, it was recommended by the Committee of



Directors 'to consider how far a canal between Loch Gilp and Loch Crinan can be effected, to examine and consider Watt's survey, and to correspond with Mr Robert Whiteworth, or any other able engineer, as to the expence of making another survey, in case the one by Watt is not approved of.' But any further proceeding, by this Society, was rendered unnecessary in consequence of the effectual adoption of the plan for that canal by a company of subscribers, by whom it is now carried on."

The warning note in the concluding paragraph of Watt's survey might well be added to present-day tenders for large undertakings, which have a way of exceeding the original estimates to an alarming degree. He says: "People conversant in subjects of this kind are already sufficiently apprized, that on a first survey it is not pretended to point out the very best method of executing a work; or to give an exact account of the price at which it may be done. . . . In this light I beg the publick to look upon what I have said only as my present opinions . . . assuring them that those opinions are the consequence of a deliberate and impartial consideration of the subject."

In view of this it is interesting to note that Watt's estimate of cutting a canal through the isthmus of Crinan, of 7 feet depth, amounted to £34,879, and for one of 10 feet depth, £48,405; while the canal, admitting vessels of 200 tons' burden, executed to the plans of John Rennie and opened in 1801, cost over £100,000.

#### PRESENT EXTENT OF THE LIBRARY.

Though the greater part of this article is devoted to what may be termed the historical side of the Library, it is not to be supposed that the modern requirements of such a Society have been neglected. While it is not claimed that the collection has been able to keep pace with the enormous output of literature in the various departments of modern agricultural science, yet by the system of exchange of publications with kindred societies, and by occasional purchase, the extent of the Library has grown from the small beginnings recounted to the number of some 6000 volumes. In the form mostly of periodical publications these are being added to daily. The Society possesses a complete set of its own 'Transactions' from 1799 to date, as would naturally be expected; but as far as can be ascertained no other complete set is extant, and these volumes, with the valuable indexes which have been issued from time to time, form in themselves a most interesting record of agricultural history and progress. There are on the shelves complete sets of the Journals of the Royal

Agricultural Society of England and of the Bath and West and Southern Counties Society ; while the publications of the Royal Society of Edinburgh, the Royal Dublin Society, and others are very fully represented.

Many of the Government publications relating to agricultural and social problems, especially in the earlier days of the Society, are also preserved, and a strong feature of the Library is its collection of sets of the better-known Stud, Herd, and Flock - Books. Among these is included a complete set of Coates's Herd - Book (now being issued by the Shorthorn Society of Great Britain) from 1822 to the present day, a set which must in its entirety be of extreme rarity.

Other subjects which are strongly represented include agricultural experiment, research, and statistics ; general agricultural activities in home and foreign countries and in the various colonies and dominions of the Empire ; botany ; the rearing and feeding of horses, cattle, sheep, pigs, and poultry ; the cultivation of cereals, potatoes, and other farm crops ; dairy science and practice ; agricultural entomology ; veterinary subjects ; fertilisers ; forestry ; and horticulture.

A catalogue of all the books and pamphlets has now been prepared and, it is hoped, will be published shortly. In it the various works are recorded under author, subject, and title, so that the contents of the Library will be readily accessible to those members interested.

## AGRICULTURAL RESEARCH IN SCOTLAND IN 1936.

BEING A BRIEF SUMMARY OF WORK AT THE  
SCOTTISH AGRICULTURAL RESEARCH  
STATIONS DURING THE YEAR.

*Readers desiring fuller information on any of the subjects mentioned  
should write to the Director of the Station at which the investigation  
is being carried out.*

### INSTITUTE OF ANIMAL GENETICS.

UNIVERSITY OF EDINBURGH, WEST MAINS ROAD.

*Pigs.*—Analysis of the accumulated data provided by the herd of pigs has shown that, under the system of management which has been adopted at Shothhead, the month of farrowing has no appreciable effect upon the rate of live-weight increase or upon the amount of food consumed. (Different stocks of pigs maintained in different types of buildings do show a very distinct seasonal difference in this respect.) In general, the larger the litter the more slowly the individuals thereof grow. This retardation in the growth rate would seem to be due to overcrowding, and was only apparent in the case of litters of eleven or over. This conclusion is confirmed by a further study of the relation between the number of pigs in the litter and the amount of food consumed per pound of live-weight gain. Here, also, the increase in food consumed was only appreciable in the case of the large litters. The greater the growth rate the less relatively do pigs eat, so that the rate of maturity can be accepted as an indication of the economy of live-weight gain—i.e., the amount of food consumed per pound of live-weight increase. It follows, therefore, that rate of maturity may be safely used as a basis for the selection of breeding stock.

A surprisingly low correlation between the weight of pigs at weaning and their subsequent growth rate has been determined. This is taken to mean that the factors which affect

the weaning weight of a pig are not the same as those which affect its subsequent growth rate, and the practical conclusion from this is that the selection of breeding stock solely on the weight of pigs at weaning time is unwise.

In order to determine whether four pigs can be safely considered as a representative sample of the litter, as is so commonly assumed in the work of Litter Testing Stations, an extensive study has been made. It has been found that this number is indeed a reliable sample of the whole litter as regards rate of live-weight increase, particularly if they are the four pigs nearest the average weight at the time of weaning. If only three pigs are taken, the loss of information amounts to 16 per cent, and two pigs cannot be accepted as a representative sample.

The problems raised by these studies have led to an experimental attack from various angles upon the general problem of determining the relative importance of genetic and environmental factors on the growth of young pigs from conception to weaning. This resolves itself into a study of the sow—litter relations during gestation and lactation. Work is therefore proceeding on the uterus and udder, regarded as environment for young pigs.

*Cattle.*—The experiment which has for its object the identification of the genetic factors which lie behind high milk yield continues. The breeds that are being used are Beef and Dairy Shorthorns, Ayrshires, Guernseys, and Jerseys, and crosses between these breeds have been made. The herd has received its Attestation Certificate.

*Poultry.*—Experiments on the mode of transmission of certain characters affecting egg production in the fowl are being continued. They relate to egg size, the ability to lay for two consecutive years without a pause, and a persistency of high egg yield beyond the two-year period. This last quality has been arbitrarily defined as the ability to lay for three or more years with a minimum of not less than 140 eggs in the third year.

Experiments of this kind are, of course, necessarily slow, but it is significant that the birds in the experiment which deals with persistency of high egg production beyond the normal two-year period show an egg production in advance of others of comparable age. This particular experiment will, in time, provide a check on the frequently expressed opinion that high pullet egg records are associated with lowered subsequent production and lowered viability. So far, twenty yearling hens from this particular strain have finished their pullet year with an average of 235 eggs per bird.

*Rabbits.*—A great deal of genetical work with the rabbit is in progress. A number of new colour and texture types of coat are being analysed, and new types which may claim the attention of users of pelts and wool are in the process of creation.

## ANIMAL DISEASES RESEARCH ASSOCIATION.

MOREDUN INSTITUTE, GILMERTON, MID-LOTHIAN.

*Louping-Ill.*—Further experience in the use of Louping-Ill preventive vaccine confirms its value as a specific method of protection against the disease. Many flock-masters have reported that the vaccine has effected the disappearance of Louping-Ill from their flocks. Over 100,000 doses have this year been issued.

*Braxy.*—The formalinised whole-culture vaccine which is now issued as a single-dose vaccine continues to prove effective. It should be noted, however, that on farms in which the disease occurs in a highly virulent form it is preferable to repeat the vaccination after an interval of fourteen days. In conjunction with the Braxy Committee of the Agricultural Research Council, the Institute is investigating Braxy-like disease in older lambs and in adult sheep.

*Grass Sickness.*—This important problem continues to be the subject of special study. During prolonged field investigations which have been carried out in the counties of Angus and Perth since 1934, a bacterial toxin has been found to be present in a proportion of per-acute cases of the disease. With the object of testing the possible significance of this toxin in the causation of Grass Sickness there has this year been arranged an extensive controlled field experiment in which it is proposed to vaccinate several hundred horses in the affected areas against this toxin, leaving unprotected an equal number on each of the farms concerned.

*Contagious Bovine Abortion.*—The research which is being undertaken in collaboration with the Agricultural Research Council's Committee on *Brucella abortus* infections consists in a study of the development of the disease in laboratory animals and in the assessment of the comparative values of avirulent and dead vaccines prepared by various methods.

*White Scour in Calves.*—Controlled field experiments designed to determine the preventive value of Vitamin A. in

White Scour are being continued, and the assessment of Vitamin A. in the colostrum of cows maintained under various systems of management is being carried out.

*Pine*.—It has been shown that Pine, as it occurs in the Western Islands and in certain areas on the mainland of Scotland, is a nutritional anæmia in which the administration of iron compounds is of specific preventive and curative value. The investigation is being continued particularly with the object of discovering whether the disease depends upon a deficiency of some catalyst such as cobalt.

The form of Pine which occurs in the region of the Solway Firth has been found to represent a distinct entity, and is now the subject of a special investigation.

## THE ROWETT RESEARCH INSTITUTE.

BUCKSBURN, ABERDEEN.

*Cattle*.—An experiment designed to elucidate the various factors which influence the value of store cattle from different districts is in progress. Groups of twenty black polled stots of approximately the same initial weight from Ireland, Orkney, and Speyside have been fed the same quantity of feed during the winter months, sufficient to keep them in thriving store condition, and are to be fattened off on grass during the coming summer. This experiment is still in progress.

Experiments on the control of contagious abortion in cattle have been concluded. Except under especially favourable conditions of management, control by segregation and isolation does not afford great hopes in the local area. The dead vaccine prepared by the veterinary officers of Northern Ireland proved ineffective, the number of abortions among the vaccinated heifers being precisely the same as among the unvaccinated controls.

*Pigs*.—With the object of determining the limits of variation in live-weight increase and carcase grading in pigs from the same litter fed individually on the same quantity and kind of food, it was found that the degree of variation was unexpectedly wide. Gilts graded better than hogs, a result in conformity with those obtained in other centres.

Individual *versus* group method of feeding pigs have been compared, all pigs being strictly rationed. The experiment is still in progress. So far it would appear that while individual feeding

results in less food being consumed per lb. of live-weight increase, this economy is a small one. Grading results are as yet incomplete. Pigs fed on the individual system are more uniform than in group feeding, where the variation in size between pigs is much wider.

The Pig Recording and Litter Testing Schemes, run in conjunction with the North of Scotland College of Agriculture, have been continued.

*Poultry.*—The natural outbreak of Fowl Paralysis in the farm's poultry stock has been utilised for an extensive research on the nature and methods of spread of this disease. The work is being carried out in collaboration with the Royal (Dick) Veterinary College and the Institute of Animal Genetics, Edinburgh, under the general supervision of the Committee on Fowl Paralysis and similar diseases of the Agricultural Research Council. Questions to be investigated during the year include :—

1. Whether the disease is infectious.
2. Whether the disease is transmitted through the egg.
3. Whether certain inbred lines of poultry are more resistant than others.
4. Whether rearing young stock on clean ground is a practicable method of controlling the disease.

Earlier work suggested that the disease *is* infectious, and that rearing on clean ground *does* give a commercially satisfactory degree of control, but these results, because of their great practical importance if correct, require careful confirmation on a more extensive scale.

*Sheep.*—Work has been concentrated on the study of the effect of different levels of nutrition during pregnancy on the health and productivity of ewes. The farm's flock of 350 ewes has been divided into two equal groups, one group fed solely on the produce of the farm during pregnancy, the other group on this dietary supplemented with concentrates. Records of the health and production of both groups are being kept.

An investigation, in collaboration with the North of Scotland College of Agriculture, has shown that healthy and fat lambs when slaughtered may contain as many as 4000 stomach worms.

At Garrochoran hill farm, the effect of feeding ferric oxide in one group and herring meal in another are being investigated in addition to the usual programme of mineral feeding.

## THE SCOTTISH PLANT BREEDING STATION.

CRAIGS HOUSE, CORSTORPHINE, EDINBURGH.

Breeding work is in progress with grain crops, potatoes, herbage plants, and swedes. As it is customary, however, to refer to the work on one of these crop plants each year, on this occasion the herbage breeding experiments will be reviewed.

The aim of the breeding experiments is to raise varieties of grasses suited to the conditions prevailing under the different systems of agricultural practice and under the different climatic conditions in Scotland. In the last report dealing with herbage grasses it was mentioned that a considerable part of the work had been devoted to the examination of wild growing ecotypes—*i.e.*, races of plants growing in particular situations to which they are adapted. Ecotypes of cross-fertilising plants are by no means uniform in type, but the majority of their components conform to a type adapted to their environment. Rigid artificial selection within an ecotype can reduce this variability, but if the process is carried too far—*e.g.*, until complete uniformity in hereditary characters is attained—seed production may be detrimentally affected. However, in order to minimise the risk of variety deterioration following repeated seed multiplications, as high a degree of genetic uniformity as is economically possible is a desirable attribute of agricultural varieties. Notwithstanding the comparative scarcity in Scotland of long-established widely distributed ecotypes of the valuable agricultural grasses, strictly localised ecotypes have proved to be a useful source of breeding material.

The herbage programme includes the breeding of 'bottom' varieties of timothy. While the primary function of a 'top' variety is to supply an abundant herbage, that of a 'bottom' variety is (a) to maintain a soil covering sufficient to prevent excessive surface evaporation of soil moisture, (b) to prevent the invasion of weeds, and (c) to augment the amount of organic matter at the time of ploughing. It is therefore not correct to assess the pasture value of all the races of any species by productivity standards alone. For instance, two varieties of timothy, one belonging botanically to the 'diploid' group and the other to the 'hexaploid' group, have been raised at the Plant Breeding Station, and so far as actual yield of hay is concerned the 'hexaploid' variety yields almost twice as heavily as the other under conditions of high soil fertility. But the 'diploid' being a bottom variety and the 'hexaploid' a top, both possess pasture value. In pasture work the consequences of competition between different species and varieties of the same species require consideration; 'bottom' varieties compete with 'bottom' varieties and



'top' with 'top,' and competition may occur between these two groups. In breeding 'bottom' varieties of timothy particular attention has been paid to races in which the time of establishment and maximum seasonal productivity in a pasture coincide with these phases in wild white clover. A race of this 'bottom' timothy is now on the market in limited quantity.

The value of an 'early bite' is appreciated by all graziers. While Italian ryegrass provides spring herbage, it lacks the necessary persistence for a long duration ley. To meet this deficiency an early leafy variety of Cocksfoot has been put on the market this season by the Society. The quantity of available seed is still small, but arrangements will be made for further seed multiplication if practical experience confirms the results of the locality trials.

Another aspect of the plant-breeding programme is the breeding of grass varieties for use in the improvement of 'run-out' pastures. Considerable areas of grassland in Scotland have degenerated into poor *Agrostis* dominated pastures. The improvement of these pastures by stages and the employment of specialised herbage varieties at each stage, without recourse to rotation of arable crops, is visualised. After initial ploughing the sequence of improvement is as follows : I. The sowing of an annual pasture composed of quick-growing large-seeded plants, the process to be repeated annually until such time as the *Agrostis* mat is either dead or, at least, is no longer an obstacle to the establishment of the small-seeded species. II. The sowing of a soil-fertility-producing temporary pasture of short duration, composed of wild white clover and other species which would favour the rapid development of the clover. III. The ultimate sowing of a longer duration pasture with wild white clover and persistent highly productive varieties of the species.

A search is therefore being made to find annual varieties suitable for grazing, the seedlings of which would be capable of penetrating an unrotted *Agrostis* mat. Varieties of wheat, barley, and oats have been examined in this respect, and although some named varieties of oats have relatively abundant foliage, the lack of a continuous succession of tillers detracts from their grazing value. However, one of the hybrid oats raised at this Station possesses many of the necessary qualities. Varieties of timothy and perennial ryegrass will shortly be tried with a view to testing their suitability for the second stage of pasture improvement.

Apart from the actual breeding work, problems of equal importance have occupied the attention of the Society's staff. The breeding of specialised herbage varieties will, it is thought, ultimately entail some system of variety Registration and Seed Certification. Experimental taxonomic

investigations have therefore been in progress for a number of years at the Plant Breeding Station. The main practical aim of these investigations is to classify the herbage varieties in such a way that the farmer can obtain varieties true to name, and also obtain accurate information concerning the suitability of any variety to any particular purpose or district.

## THE WEST OF SCOTLAND AGRICULTURAL COLLEGE.

### (a) MILK PRODUCTION DEPARTMENT.

*Proven Sires.*—In the work on Proven Sires an attempt has been made to test the value for practical purposes of the various indices which have been proposed as measures of the breeding value of a bull. The results so far indicate that there is no one figure which will give a direct measure of the value of a bull. Where the records of a considerable number of daughters of a bull and of the dams of those daughters are available some indication of the value of the bull can be obtained, if all the facts regarding management and other factors are kept in mind. Any single index figure may be quite misleading.

*Living Proven Sires.*—In association with the Ayrshire Cattle Herd Book Society a second list of Living Proven Sires has been prepared. Similar work is being carried on with the British Friesian Cattle Club. A model has been prepared of a bull pen for the housing of bulls which are difficult to handle.

*Good Breeding Dams.*—This work is being continued on lines similar to that with the Proven Sires.

*Sprouted Grain.*—A long-time trial with Sprouted Grain as a feed for milking cows has been undertaken. Another year will have to elapse before the results are available.

*Dried Grass.*—This is being tested with two groups of cows in milk. The cows are milking fairly well when fed on dried grass alone, though there appears to be a definite limit to their capacity for this feed.

*Protein Feeds.*—During the past twelve years fifteen trials on the protein supply for dairy cows have been conducted. From these, two general conclusions may be drawn: (1) there is a tendency in many cases to feed too much protein to dairy

cows, and this renders the ration unnecessarily expensive—in no case should over 20 per cent of digestible crude protein be included in the grain mixture, and in many cases the limit should be nearer 15 per cent; (2) if good home-grown roughages and a grain mixture with reasonable variety be fed, the question of the 'quality' or 'biological value' of the proteins becomes of little practical significance.

*Herring Meal.*—This feed has given satisfactory results in the raising of dairy heifers. It is also being tested out with milking cows.

#### (b) MILK UTILISATION DEPARTMENT.

##### MILK INVESTIGATIONS.

*Mastitis Effects.*—The most troublesome factor in milk production in South-West Scotland is mastitis. This now widespread disease is a frequent cause of defective flavours in market milk and of difficulties in cheese-making. Of the 1094 samples of milk obtained during the past year from individual cows in herds in the College area, 507 (or 46 per cent) were definitely infected with mastitis, while 142 (or 13 per cent) were not normal in reaction, and suggested some mammary disturbance. Experience in the retesting of such suspect samples shows that about one-third show positive evidence of a mastitis infection in later stages of the lactation. The prevailing infective organism was *Streptococcus mastitidis*, but in a considerable number of diseased animals the mastitis was caused by pathogenic staphylococci. It was observed that the flavour of the milk and the quality of cheese are more adversely affected by the staphylococcal than by the streptococcal form of mastitis. It was also noted that a staphylococcal infection of the mammary gland may render the milk practically unpotable even in the early stages of the disease, when no clinical symptoms are as yet apparent and when the milk still appears to be physically normal. It should also be noted that the raw milk of cows suffering from staphylococcal mastitis may cause definite gastric disturbance in the consumer.

In last year's report reference was made to the characteristic features of cheddar cheese made from mastitis infected milk. An extension of this work had made it clear that not only is mastitis a common cause of slow working and weak-bodied cheese, but also that cows which have apparently recovered from an attack of mastitis produce milk in subsequent lactations whose cheese-making properties are not normal.

**Examination of farm milk returned by Creameries and Milk Depots as unsuitable for the market or for manufacturing purposes** has shown that mastitis has been the chief cause of rejection.

*Flavour Defects* in milk caused by physiological disturbances or associated with the food factor were only infrequently encountered. The chief sources of trouble have arisen from metallic contamination, causing undesirable oxidation changes in the butter-fat, from imperfect sterilisation of the dairy utensils, and from the lack of adequate cooling of the newly produced milk in the warmer months of the year.

*Acidity in Milk.*—Occasional cans of milk returned by creameries to the primary producer because of a higher than normal titrateable acidity have shown that such milk might be of normal reaction when reference is made to the hydrogen ion concentration, to smell and taste, and to keeping properties. In such cases the 'natural' acidity of the milk was high owing principally to early lactation effects and not to bacterial fermentation.

*Curd Tension.*—The curd tension of 101 samples of milk from individual cows was determined by Hill's method; the majority of the samples tested exhibited a medium curd tension; only a small proportion could be regarded as typical soft curd milks—*i.e.*, milks of less than 30 grams curd tension.

*Butter-fat and Solids-not-fat.*—Determinations were made on 150 milk samples taken from bulk and from individual cows (equal portions of two successive milkings); 15 were found to contain less than 3 per cent butter-fat and 5 less than 8.5 per cent solids-not-fat.

*Water Supplies of Dairies.*—Among the samples of water supplies of farm dairies which were submitted for examination, four were found to be contaminated with bacteria of the coliform or the fluorescens type, and because of this could not be regarded as suitable for dairy purposes.

#### CHEESE INVESTIGATIONS.

*Putrefaction* in cheddar cheese, referred to in previous reports, has been encountered in a mild form in several samples of farm and factory cheese during the past season. In one case which was investigated, putrefactive bacteria of the type causing 'stinker' cheese were found to be present in the commercial rennet used by the cheese-maker.

*Sponginess and White Spots* in a group of farm-made cheeses were found to be associated with the presence of coliform bacteria, indicating either faecal contamination of the primary milk or an infection from unclean utensils.

*Lack of Body*, weakness in texture, and an inferior flavour, which characterised the autumn-made cheeses of a local dairy factory, were found to be associated with the presence of large numbers of alkali-forming bacteria, presumably of soil origin. The commercial rennet and the starter, thought to be blame-worthy by the cheese-maker, were found to be free from the specific organisms, but at least one milk supply was shown to be infected.

*Openness in Cheddar Cheese* of a prize-winning dairy was found to be associated with the prevalence of propionic acid bacteria and yeasts in the cheese mass. The cheeses in this case were made from naturally fermented milk without the aid of starter.

*Black Discoloration* in a sample of crustless cheese was shown by minute analysis to be derived from the metal wrapping.

#### BUTTER INVESTIGATIONS.

In the butter samples submitted for examination, lack of body and texture was the chief weakness; this physical defect was associated either with the feeding of the cows or with inadequate temperature control of the ripened cream before churning.

A colour fault of the type known in New Zealand as the 'primrose tint' was found to be related to the evaporation of the surface moisture, and not to any alteration of the butter pigment itself.

All samples of butter submitted for assessment under the National Mark Scheme were found to conform to the required standards.

#### STARTERS.

During the past year, 2130 starter cultures were issued to the dairy industry. Of this total, 57 per cent were required for cheese-making and 43 per cent for butter-making. Separate cultures for butter and for cheese are supplied. In a few cases where the cultures were reported to be lacking in activity, the fault was shown to be due to the quality of milk used in their propagation.

## EXPERIMENTAL WORK.

*Canned Cheese.*—Extended trials made during the summer of 1936 have shown that the canning of cheese is a practicable procedure. Provided that the primary milk is of good quality, that the curd is protected from mould infection during the manufacturing process, and that the cheese curd is well dried before cheddaring, an article of good quality may be made. There is practically no loss of weight during curing, and a rind or crust does not form on the cheese. But the cheese must be protected from high temperature effects during storage, and in no case should the ripening temperature exceed 60° F. Milk of the mastitis type was found to be especially unsuitable for making canned cheese, since it results in a curd which holds whey very tenaciously, and since no moisture escapes from the cheese in the container, the cheese becomes sour during the curing process and sheds whey into the can.

Canned cheese can be ripened more quickly than normally made cheese, but comparative trials have shown that cheddar cheese made in the ordinary manner develops on curing a better texture and a finer flavour.

The chief drawback to the making of canned cheese from normal milk is the liability to mould infection during the manipulation processes, and the subsequent overgrowth of mould on the cured cheese in the can.

*Pasteurised Milk Cheese.*—The effects of pasteurising the primary milk to a temperature of 142° F. for thirty minutes in the characteristics of Cheshire cheese were determined by a number of trials. Under the conditions of the experiment, it was found that a cheese with the typical Cheshire characteristics could be obtained from the heat-treated milk, but that compared with raw-milk cheese made from the same milk, the pasteurised milk cheese took somewhat longer to develop the desirable mellowness during curing.

*Soft and Hard Curd Milk in Cheese-making.*—Comparative trials of soft curd and of hard curd milk appear to indicate that milk of a lower curd tension than 30 grams is not desirable in cheddar cheese-making. Soft curd milk yields a cheese curd, which is physically soft and weak, and which retains such weakness during the ripening process. Hard curd milk, on the other hand, produced a firm-bodied and close-textured cheese, and a curd ratio which was lower than normal. Milk with a curd tension of 60 to 90 grams appears to be well adapted for cheddar cheese-making.

*Effect of Specific Foods in Butter-making.*—In collaboration

with the Milk Production Department, the relative effects of feeding fish meal and dried grass to dairy cows were determined. In the case of fish meal, a slightly oily flavour could be detected in the milk and some degree of tallowiness in the butter made from it. The colour of the butter made from fish meal milk was definitely whiter than the control. In the case of dried grass, the most pronounced effect was a deepening of the colour of the butter-fat. This intensified colour appeared soon after the commencement of the introduction of the dried grass to the feeding régime. Butter made from the grass-fed group had a good body and texture, but there was no perceptible increase in the aroma and no marked effect on the flavour compared with the control.

## THE HANNAH DAIRY RESEARCH INSTITUTE.

KIRKHILL, Ayr.

*Nutrition.*—A study has been made of the relative nutritive value of young pasture grass, fresh and dried, cut in spring and autumn. Marked differences were found in the biological value of spring and autumn grass, but no difference was found between fresh and dried grass. In this connection analyses have been carried out which show that spring grass protein contains a higher percentage of its N as lysine N than the autumn grass.

Investigations have been continued into the values of various types of milk for calf rearing.

*Lactation.*—Work has been completed on the effect of salivary activity on the composition of bovine blood and also on the levels of various fatty constituents of the blood during fasting and realimentation.

*Contagious Bovine Abortion and Mastitis.*—Further work has been carried out into the various problems connected with these two diseases, and accurate methods of diagnosing the presence of mastitis organisms have now been devised. An investigation has also been carried out on the effect of mastitis milk on the reliability of the modified methylene blue reduction test. Segregation methods are still being tried out as a means of eliminating contagious abortion.

*Canned Milk Products.*—Work has been completed on the discoloration in canned cream, and the results show this defect to be due to volatile sulphur compounds liberated from the protein in the cream, which is denatured by excessive

sterilising treatment. Investigations are also being carried out into the uses of various tests for the grading of milk used in the manufacture of milk products.

*Grass Conservation.*—Two commercial grass driers are in operation on the Institute's farm, and it is hoped to procure costs of production with these two driers during the coming year.

*Special Investigation.*—An inquiry has been made into the milk-drinking habits of school children, and a full report on this subject has now been published.

## MACAULAY INSTITUTE FOR SOIL RESEARCH.

CRAIGIEBUCKLER, ABERDEEN.

The work carried out at the Macaulay Institute for Soil Research can, as previously, be divided into the following main groups: Soil Fertility Investigations and Advisory Work, Soil Surveys and Geological Work, the Study of Peat Soils and Soil Drainage Investigations.

*Soil Fertility Investigations and Advisory Work.*—The soil advisory department of the Institute has, during the past year, given advice regarding more than 1000 soils to farmers throughout Scotland. Information is available, free of charge, regarding the lime and manurial requirements of soils, and in this connection, in cases where soil deficiency in some of the minor elements is suspected, spectrographic methods are employed for soil testing. Such methods are most suitable for the detection of boron (to the absence of which are attributed 'crown rot' in sugar beet and 'raan' in turnips) and other elements which it is difficult to determine chemically in the small traces found in soils.

The field and pot experiments carried out in previous years to correlate laboratory results with conditions on the farm have been continued and extended. A detailed investigation of the amounts of potash and phosphate found at different depths in the soil, and of their variations throughout the year, is also in progress for several soil types.

The study of forest soils by the pot method is being continued, and the experiments carried out in conjunction with the Permanent Committee for Basic Slag have also been continued, the yield of hay being determined at one of the centres in order to study the residual effects.



Special fertility investigations on forest nursery soils have again been carried out.

*Soil Surveys and Geological Work.*—The soil survey of the Eastern part of Kincardineshire has been continued.

Areas in Aberdeenshire and Banffshire have been surveyed, and over 100 soil profiles, to a depth of 4-5 feet, were opened and sampled in these areas. Most of the district surveyed comprises 'brown soils,' as distinct from the more leached podzols found over much of Scotland, and the laboratory analyses of these brown soils is in progress. They appear to have unusual base exchange properties, and interesting results have been obtained. Many analyses for survey purposes of soils from other areas have been made.

Investigations of the geology and mineralogy of soils and parent materials in the areas surveyed have been carried out.

*Peat Soils.*—The work carried out at the Macaulay Farm in Lewis shows that it is possible to reclaim successfully a very barren type of peat land which is widespread in Scotland. The best method of approach appears to be first the establishment of pasture, which has the effect of promoting humification of the peat and facilitating drainage. This renders subsequent cultivation and conversion to arable land easier if arable land is desired, but land of this type is particularly well suited for pasture.

The Lewis crofters continue to take advantage of the scheme whereby they may carry out similar reclamation work on their own land with the aid of implements lent by the Macaulay Farm. A new tractor and implements are being provided by the Department of Agriculture, and it is hoped to extend this work considerably.

In connection with the special scheme of reclamation undertaken on behalf of the Commissioner for Special Areas, the drainage of an area of about 550 acres of peat moss at Carnwath, Lanarkshire, has been continued. The cutting of the drains has been completed, and in the spring drain boxes will be laid. Liming, manuring, and cultivation will later be carried out. This scheme is providing work for a considerable number of local unemployed.

In the laboratory investigations are also being carried out on the physical and chemical properties of peat soils, determinations being made of oxygen uptake, water-holding capacity, &c.

*Special Investigations.*—The pasture investigations undertaken jointly with Mr Heddle of the Edinburgh College of Agriculture have been continued.

Work is being carried out in conjunction with the Animal

Diseases Research Association in cases where it is suspected that soil deficiencies or excesses may be the cause of disease, as, for example, in sheep pining. In these investigations, where it is the minor soil constituents which are being examined, spectrographic methods are being used.

The investigation on the nutrient content of various layers of a number of selected Scottish soils is being continued.

*Study of the Drainage Constituents of the Soil.*—The drainage waters from the three Craibstone lysimeters were collected and measured as usual during the year 1936, and determinations made of the principal manurial constituents. Barley, with seeds for hay, was grown, with manurial treatment given to Nos. 2 and 3. No. 1 was untreated. The crop was weighed, grain and straw separately, and ash analyses are being carried out.

The study of the composition of the small amount of suspended colloidal material in the drainage waters was continued.

## MILK RECORDS.

THIRTY-FOURTH YEAR—RECORDS OF 36,211 COWS.

By WILLIAM STEVENSON, B.Sc., N.D.A., N.D.D., Superintendent,  
The Scottish Milk Records Association.

SYSTEMATIC milk recording in Scotland was continued in 1936 under the direction of the Scottish Milk Records Association on the same lines as in 1935 and previous years. The scheme of private or unofficial milk records for unregistered herds inaugurated in 1924 was also continued during this year.

The Association in 1936 consisted of the following members :

Name and Address.	Body Represented.
Mr William Mitchell, Bennan, Straiton .	Central and South Ayrshire Milk Recording Society (6 Circuits).
Mr William D. McCubbin, Lochlands, Maybole	
Mr William Niven, Estate Office, Sorn .	
Mr Andrew Wilson, Finlayston, Ochiltree .	
Mr George Templeton, Carnell Farm, Hurlford	Central Ayrshire No. 2 Milk Recording Society.
Mr James Barr, Whiteshaw, Carluke . .	Central Scotland Milk Recording Society (5 Circuits).
Mr T. Johnston, Standalane, Falkirk . .	
Mr Alex. Paterson, Cathburn, Newnains .	
Mr George Stewart, The Drum, Bo'ness	
Mr R. R. Wardrop, Ditch Farm, Cambuslang	Dumbartonshire Milk Recording Society.
Mr Alex. Y. Allan, Aitkenbar, Dumbarton .	
Mr Matthew Cochrane, Catlinns, Lockerbie .	Dumfriesshire Milk Recording Society (3 Circuits).
Mr Robert Miller, Shawsholm, Closeburn .	
Mr Mungo Sloan, Hunterhouse, Lochmaben .	East Lothian and Border Milk Recording Society.
Dr Chalmers Watson, Fenton Barns, Drem .	
Mr A. Dryburgh, Methilhill, Windygates .	Fife Milk Recording Society (2 Circuits).
Mr Gilbert R. McGarva, Estates Office, Colinsburgh	
Mr D. J. Gordon, Cullaird, Inverness . .	Highland Milk Recording Society.
Mr Dugald Graham, West Backs, Campbelltown	Kintyre Milk Recording Society.
Mr John T. Kirkwood, B.Sc., N.D.A., Scorrieholm, Lesmahagow	Lesmahagow Milk Recording Society.
Mr John Wallace, Whitehills, Sorbie . .	Lower Wigtownshire Milk Recording Society.

Name and Address.	Body Represented.
Mr Robert Laird, Lawthorn, Irvine . .	North Ayrshire (John Speir) Milk Recording Society (3 Circuits).
Mr J. M. Matthew, Girthill, Saltcoats . .	
Mr Thomas Murdoch, West Tannacrieff, Kilmarnock	
Rt. Hon. Lord Carnegie, K.C.V.O., Elsick, Newtonhill	North of Scotland Milk Recording Society (3 Circuits).
Mr J. D. Paton, Grandhome, Woodside . .	
Mr Robert Howie, Flatterton, Greenock . .	Renfrew and Bute Milk Recording Society (2 Circuits).
Mr John Telfer, Branchal, Bridge of Weir .	
Mr Andrew M'Cartney, West *Dykebar, Paisley	Renfrewshire (Upper Ward) Milk Recording Society.
Mr Andrew Cochran, High Ardwell, Kirkcolum	Rhins of Galloway Milk Recording Society (4 Circuits).
Mr John Forster, Mains of Larg, New Luce	
Mr J. M'Intyre, jun., Logan Mains, Ardwell	
Mr John M. H. Whyte, Kirkmabreck, Stranraer	
Mr H. G. Baird, Kirkchrist, Kirkcudbright	Stewartry of Kirkcudbright Milk Recording Society (5 Circuits).
Mr George Barbour, Auchengibbert, Crocketford	
Mr T. Graham Clement, Howell, Kirkcudbright	
Mr Walter C. Crawford, Chapmanton, Castle Douglas	
Mr Sinclair Watson, Viewfield, New Galloway	
Col. W. T. R. Houldsworth, Kirkbride, Maybole	The Ayrshire Cattle Herd - Book Society of Great Britain and Ireland.
Mr James Howie, Muirside, Holywood . .	
Mr John R. Miller, Midkelton, Castle Douglas	
Mr A. W. Montgomerie, Westburn, Cambuslang	The British Friesian Cattle Society.
Mr James Kilpatrick, Craigie Mains, Kilmarnock	
Mr John Telfer, Branchal, Bridge of Weir . .	The Highland and Agricultural Society of Scotland.
Mr George Buchanan, Hunterhill, Paisley . .	
Mr W. P. Gilmour, Balmangan, Borgue	
Mr Alex. Munro of Leanach, Culloden Moor	
Mr James Dunlop, Midland, Prestwick . .	The West of Scotland Agricultural College.
Principal W. G. R. Paterson, 6 Blythswood Square, Glasgow	
Mr John N. Watson, Tarelgin, Coylton . .	The Edinburgh and East of Scotland College of Agriculture.
Mr A. Cunningham, D.Sc., 13 George Square, Edinburgh	
Mr A. M. Smith, D.Sc., 13 George Square, Edinburgh	
Mr Arthur R. Wannop, B.Sc., B.Eng., 41½ Union Street, Aberdeen	The North of Scotland College of Agriculture.
Professor J. Hendrick, Marischal College, Aberdeen	
Mr J. F. Tocher, D.Sc., 41½ Union Street, Aberdeen	

Name and Address.	Body Represented.
Mr John Forster, Mains of Larg, New Luce	} Animal Diseases Research Association
Mr W. Cassels Jack, Robiesland, Lanark	
Mr A. B. Fowler, B.Sc., Kirkhill, Ayr.	} The Hannah Dairy Research Institute.
Mr Norman C. Wright, M.A., Ph.D., Kirkhill, Ayr	
Mr Allan Barr, Hobsland, Monkton	} Co-opted Members.
Mr Andrew C. M'Candlish, Ph.D., B.Sc., Auchincruive, Ayr	
Lord Rowallan, Rowallan, Kilmarnock	
Sir Hugh Shaw-Stewart, Bart., K.C.B., Ardgowan, Inverkip	
Lt. Col W. Guy Shaw-Stewart, Ardgowan, Inverkip	

*Chairman*—Mr Robert Howie.

The following were the principal members of the staff :—

*Secretary and Treasurer*—Mr John Howie.

*Superintendent*—Mr William Stevenson, B.Sc., N.D.A., N.D.D.

*Assistant Superintendent*—Mr Percy H. Hart.

## SCHEME OF OFFICIAL MILK RECORDS.

### ADMINISTRATION.

In 1936, as in previous years, the scheme of official milk records was administered by the Association through local milk recording societies. The grant from the Treasury, obtained through the Department of Agriculture for Scotland, was continued in 1936 on the same conditions as in the previous year. The amount authorised was £2619, compared with £2543 for 1935.

Grants were allocated to local societies on the following scale :—

1. Societies testing at intervals of not more than twenty-one days :—

(a) The hire of the necessary milk-testing appliances free of annual charge, the society to upkeep the apparatus in good condition.

(b) An annual grant of 9s. 6d. per member towards the cost of surprise check tests.

2. Societies testing at intervals of from twenty-two to twenty-eight days :—

(a) The hire of the necessary milk-testing appliances free of annual charge, the society to upkeep the apparatus in good condition.

(b) An annual grant of 8s. per member towards the cost of surprise check tests.

During the latter part of 1935 and the earlier months of 1936 every effort was made to obtain new members for local

societies throughout the various dairying districts of Scotland, and 66 definite applications were received. But for various reasons, such as members disposing of their dairy herds or removing from their farms, &c., there were a considerable number of resignations.

All the local milk recording societies which operated in 1935 continued in 1936. The number of recorders' circuits in 1936 was 41, the same number as in the previous year. The number of herds officially tested was 800, and the number of cows officially tested 36,211, an increase of 30 herds and 1339 cows from the previous year, and the largest number of herds and of cows tested in the history of the Association.

The following is a list of the milk recording societies which operated in 1936, with the name and address of the Secretary of each society :—

Name of the Society.	Secretary.
Central and South Ayrshire (6 Circuits)	Mr E. A. Bell, M.A., B.Sc., 13 Alloway Street, Ayr.
Central Ayrshire No. 2	Mr James Caldwell, Moorfield, Kilmarnock.
Central Scotland (5 Circuits)	Mr Arthur Gilmour, C.A., 23 Silvergrove Street, Glasgow.
Dumbartonshire . . .	Mr Robert Bilsland, Quay Place, Dumbarton.
Dumfriesshire (3 Circuits)	Mr Thomas Henderson, Solicitor, Lockerbie.
East Lothian and Border	Mr Andrew Young, W.S., 28 Queen Street, Edinburgh.
Fife (2 Circuits) . . .	Mr D. B. MacKenzie, Commercial Bank, Thornton.
Highland . . . . .	Mr J. M. Hunter, Queensgate, Inverness.
Kintyre . . . . .	Mr Robert Young, Drum, Kilkenzie.
Lesmahagow . . . . .	Mr James Hamilton, Auldtoun, Lesmahagow.
Lower Wigtownshire .	Mr William Christison, Barglass, Kirkinner.
North Ayrshire (John Speir) (3 Circuits)	Mr John W. Goudie, Union Bank, Kilmarnock.
North of Scotland (3 Circuits)	Mr James W. Mathewson, 13 Hutchison Terrace, Aberdeen.
Renfrew and Bute (2 Circuits)	Mr Thomas Hunter, Solicitor, 35 High Street, Paisley.
Renfrewshire (Upper Ward)	Mr William Henderson, Glyndusk, Caplethill Road, Barrhead.
Rhins of Galloway (4 Circuits)	Mr W. Brown Moir, 8 Bridge Street, Stranraer.
Stewartry of Kirkcudbright (5 Circuits)	Mr Patrick Gifford, Solicitor, Castle Douglas.

#### SEASON 1936.

The following table shows for each society or circuit the number of herds, the number of cows tested, the average interval between the tests, and the duration of the recording season :—

Name of the Society or Circuit.	No. of Herds.	No. of Cows Tested.	Average Interval between Tests, in Days.	Duration of Recording Season, in Weeks.
<b>Central and South Ayrshire—</b>				
1. Ayr and Troon . . . . .	17	675	21	52
2. Cumnock and District . . . . .	19	623	24	52
3. Girvan and District . . . . .	18	788	23	52
4. Kilmarnock and District . . . . .	18	727	23	52
5. Mauchline and Drongan . . . . .	18	618	23	52
6. Maybole and District . . . . .	19	852	24	52
7. Central Ayrshire No. 2 . . . . .	17	683	23	52
<b>Central Scotland—</b>				
8. Carlisle and District . . . . .	23	822	28	52
9. Dunblane and District . . . . .	20	728	26	52
10. East Kilbride and District . . . . .	22	870	28	52
11. Falkirk and Linlithgow . . . . .	20	761	26	52
12. Strathendrick . . . . .	21	797	28	52
13. Dumbartonshire . . . . .	21	814	27	52
<b>Dumfriesshire—</b>				
14. Mid Annandale . . . . .	22	977	28	52
15. Upper Annandale . . . . .	20	979	26	52
16. Upper Nithsdale . . . . .	21	913	27	52
17. East Lothian and Border . . . . .	20	917	26	52
<b>Fife—</b>				
18. Dunfermline and Kirkcaldy . . . . .	23	834	28	52
19. Cupar-Fife and Perth . . . . .	22	755	28	52
20. Highland . . . . .	18	677	28	52
21. Kintyre . . . . .	11	479	28	52
22. Lesmahagow . . . . .	24	821	28	52
23. Lower Wigtownshire . . . . .	21	1150	28	52
<b>North Ayrshire (John Speir)—</b>				
24. Fenwick . . . . .	21	994	27	52
25. 'John Speir' . . . . .	22	734	28	52
26. Stewarton and Montgomerie . . . . .	23	923	28	52
<b>North of Scotland—</b>				
27. Forfarshire and Kincardineshire . . . . .	19	829	26	52
28. Aberdeen and District No. 1 . . . . .	18	861	28	52
29. Aberdeen and District No. 2 . . . . .	20	906	28	52
<b>Renfrew and Bute—</b>				
30. Bute and Inverkip . . . . .	21	692	28	52
31. Paisley and Kilmacolm . . . . .	20	700	26	52
32. Renfrewshire (Upper Ward) . . . . .	14	636	28	52
<b>Rhins of Galloway—</b>				
33. Kirkcolum and District . . . . .	19	1319	26	52
34. Kirkmaiden and District . . . . .	15	1422	28	52
35. Luce Valley . . . . .	20	1266	28	52
36. Stranraer and District . . . . .	17	1298	27	52
<b>Stewartry of Kirkcudbright—</b>				
37. Dalbeattie and New Abbey . . . . .	19	979	25	52
38. Castle Douglas & New Galloway . . . . .	18	1044	24	52
39. Castle Douglas and District . . . . .	19	1055	25	52
40. Kirkcudbright and District . . . . .	20	1232	26	52
41. Borge, Twynholm & Gatehouse . . . . .	20	1061	26	52
<b>Total No. . . . .</b>	<b>800</b>	<b>36,211</b>	<b>...</b>	<b>...</b>

## DEFINITIONS.

The milk records compiled by the Association are records of the estimated quantity of milk produced by each cow in a separate lactation, and of the estimated percentage of milk fat contained in the milk. For convenience a gallon of milk is reckoned as 10 lb. A gallon of milk of average quality weighs almost exactly  $10\frac{1}{2}$  lb. The following further particulars concerning each record were also given wherever possible :—

- Name of cow, byre number, and herd-book number.
- Sire of cow and herd-book number of sire.
- Dam of cow and herd-book number of dam.
- Date of birth.
- Date of calving preceding opening of record.
- Number of weeks in milk.
- Date of calving after record closed.

The following particulars of the preceding record were appended to each record, where available :—

- Date of calving preceding opening of record.
- Quantity of milk in gallons.
- Percentage of fat in milk.
- Number of weeks in milk.

The milk yields were estimated in respect of quantity and milk-fat percentage from the results of systematic periodic tests by trained recorders approved by the Association. The recorders visited the farms for this purpose at intervals varying from twenty-one to twenty-eight days, and each day of visit was regarded as the middle day of the period covered by the test. Milk records estimated in this way approximate closely to the actual milk yields.

## METHOD OF RECORDING—OFFICIAL RECORDS.

A distinctive feature of milk recording in Scotland in 1936, as in former years, was that the official records were entirely the work of trained official recorders. Recorders had previously to undergo a special course of training in milk recording at the West of Scotland Agricultural College, or other approved College of Agriculture. Only candidates of good character and good general education were selected to attend these courses ; and all recorders, before appointment, were approved by the Executive Committee of the Association.

All dairy farmers taking advantage of the Association's scheme were arranged into Local Milk Recording Societies employing one or more recorders, the Executive Committee



having the power to transfer members from one local society to another, in order to find accommodation for new applicants, and at the same time avoid overlapping of recorders' circuits. Each local society applying to the Association for licence to conduct milk recording under the Association's scheme signed the form containing the Association's rules and regulations, and agreed to conform to these rules. The local society selected and appointed their recorder or recorders from the list of approved recorders obtained from the Association. Apparatus, chemicals, sheets, and books were selected and arranged for by the Association, all byre sheets and record books used by the recorders being supplied free of charge. Thus uniformity of method was, as far as possible, assured.

The official recorder visited each herd at intervals of not more than twenty-eight days, or more usually from twenty to twenty-five days. He, or she, arrived at the farm in the afternoon, usually by means of a small pony and trap provided by the local society for the purpose, and was accommodated at the farm overnight. All cows giving milk in each herd, as far as was possible, were included in the records. Each cow was clearly distinguished in the byre by a stall number on the wall, immediately in front of, and above the level of the cow, and registered animals were also indelibly tattooed on the ears with distinctive registered tattoo markings. The cows were milked in the same rotation, evening and morning, on the occasion of the recorder's visit. The recorder weighed and sampled the milk of each cow in the evening, noting the time at which each cow was milked, and entered the results in the corresponding columns in the byre sheet, taking up a position in the byre as near to the milkers as possible, so as to have them in full view, and as far as practicable receiving the milk direct from the milker at the cow's side. He again weighed and sampled the milk of each cow in a similar manner in the morning, and entered the results in the byre sheets. He then tested the mixed evening and morning sample for each cow by the Gerber method for percentage of milk fat. He entered in the byre sheet any unusual conditions likely to affect the milk yields. The recorder was required to see that all milk samples and byre sheets were securely locked up overnight or during his absence. From the daily results the recorder calculated and completed the byre sheets, multiplying the yields by the exact number of days which had elapsed since the last test, but so calculating throughout that each day of visit was regarded as the middle day of the period covered by the test. Special ready reckoners were used to facilitate calculating and to ensure greater accuracy.

The byre sheets were written out in duplicate. The principal copies were posted at regular intervals to the office of the Association, and the second copies left with the respective

members. The recorder transferred the results from the extended byre sheets to the milk record book for the herd indelibly in ink, each cow being assigned a separate page, at the top of which full particulars of the cow were entered, including the indelible tattoo marks on the animal.

The byre sheets were carefully revised and corrected in the Association's office during the season, and a list of the necessary corrections sent to each recorder periodically to be entered in the record books.

Visits of inspection were made to each recorder and to the members of local societies at the different farms periodically throughout the year by members of the Association's staff, and reports thereon submitted to the Executive Committee. The Executive Committee reserved the right to withdraw approval of any recorder at any time, or to limit the period of service of any recorder with any particular society. Members of local societies refusing to observe any of the rules of the Association, or deemed to be guilty of conduct injurious to the true interests of milk recording, were liable to be temporarily or permanently suspended.

Another distinctive feature was the surprise check tests, the records of each herd being checked in this way about two times throughout the year. The recorder was instructed, by a letter from the superintendent on a date unknown to recorder and owner of herd, to remain at the same farm another day and make another complete twenty-four hours' test. The surprise test results were entered on special buff-coloured byre sheets, and in the record books in red ink immediately below the results of the regular test of the previous day. The buff byre sheets were posted to the Association's office with the other sheets, and any abnormal differences were immediately noted and were reported to the Executive Committee.

As a result of this system of surprise check tests, each page of the 1936 milk record books contains entries in red, comparison of which with the immediately preceding entries provides valuable evidence as to the genuineness of the milk records.

In addition to the surprise check tests made by the recorder, a number of independent surprise tests were made by the Association's staff in order to check the recorder's work.

All records were closed at the end of December, the current lactations being carried forward to the new books of the following year. Finally, summary sheets were written out in duplicate showing the total milk yield for each cow for the lactation or part lactation, with full particulars of the cow, dates of calving, &c. The principal copy of the summary sheet was posted to the Association's office with the record book, and the second copy left with the owner of the herd.

All record books and summary sheets were carefully revised,

corrected in detail, and initialled in the Association's office during the next few months, the record books being returned later to the respective members, and the summary sheets retained and bound for future reference.

The milk records were next classified into three groups for cows and heifers respectively on the following basis. Experience has confirmed the view that the most useful comparison is obtained by reckoning the yields in terms of pure butter fat. Such a comparison takes into consideration both the quantity and the quality of the milk.

Cows with a milk record equivalent to not less than 280 lb. of butter fat, and heifers with a milk record equivalent to not less than 224 lb. of butter fat, were grouped into Class I. Cows and heifers with milk records of less than two-thirds of these amounts—viz., 186 and 149 lb. of butter fat respectively—were grouped into Class III.

The following short table shows the corresponding values of these yields in fairly good milk of 3·5 per cent milk fat :—

Class.	Yield of Butter Fat. (lb.)	Corresponding Yield in Milk of 3·5 per cent Fat. (Gallons.)
Cows in Class I. . .	Not less than 280 . .	800
Heifers in Class I. . .	Not less than 224 . .	640
Cows in Class III. . .	Less than 186 . . .	531
Heifers in Class III. . .	Less than 149 . . .	426

All cows and heifers with milk yields falling between these limits would come into Class II. Such animals naturally claim less attention than the good milkers or the obviously unprofitable animals. It should be noted, however, that Class II. would include a certain number of unclassifiable yields, as there were a number of cases where, from various causes, the results of a whole normal lactation could not be obtained.

It should be noted that while the above standards for classification of milk yields are the same as for 1934 and 1935, they are higher than those formerly adopted, in the proportion of 280 lb. of butter fat for a Class I. cow to the former standard of 250 lb., the other standards bearing the same relation as formerly to the cow Class I. standard. This decision of the Executive Committee brings the Class I. standard for cows and heifers respectively into line with those adopted since 1924 for the Association's Annual Register of High-yielding Cows. This subject was dealt with more fully in the 1934 report under "General Review."

The Association will shortly publish an annual report giving fuller details of the work of the Association and of each local

milk recording society during 1936. This report will include tables showing for each farm the number of cows and heifers tested and the number and percentage included in Classes I. and III. respectively. Each herd is included under the respective local society, but is represented only by an alphabetical letter, the owner being advised privately of the identity in the report of his own herd or herds. From these tables any member may see how his herd compares with other herds in the same or any other district, and the improvement in his own herd compared with previous years. The report will also show in tabular form the percentage of Class I. and of Class III. animals of all animals tested under the Association's scheme during the year, and will thus afford a valuable indication of the progress in milk production generally in recorded herds.

An important feature of the Association's annual reports, from 1917 inclusive, is the register of good milking cows with the names and addresses of owners and full particulars of the milk records. This register includes only the records of animals with a milk yield equivalent to not less than 280 lb. of butter fat in the case of a cow, and 224 lb. of butter fat in the case of a heifer, and is further restricted to animals which completed their lactations before the end of the year and gave birth to another calf before 1st May 1937. Full particulars of each record are given, and all lists of records are submitted to the owners of the respective animals for revision before publication. The register is of great value to all interested in improved milk production and in the breeding and rearing of animals of the best milking strains, and is invaluable for reference.

It should always be kept in mind when making a comparison of cows in different herds or in different districts that the different methods of dairying practised have a considerable influence on the milk yields, and that therefore milk yields alone do not necessarily indicate the true relative inherent or hereditary milking qualities of the animal. But the authenticated milk records compiled by the Association are of inestimable value to breeders and owners of dairy cows if properly interpreted.

#### REVIEW OF 1936—OFFICIAL RECORDS.

Recording was carried on in 1936 by 41 local societies or circuits, comprising 800 members. The number of cows tested in 1936 was 36,211, compared with 34,872 in 1935, and was the largest number officially tested in the history of the Association.

The percentage of dairy cows officially recorded in Scotland

compares favourably with that of other countries. With the exception of Denmark, where milk recording was introduced earlier than in Scotland and conditions prevail more favourable to movements on a co-operative basis, Scotland contains a higher proportion of officially recorded dairy cows than any other country.

During the year 16 recorders, for various reasons, terminated their engagements. The Executive Committee, however, in the same period approved of 21 applicants for the position of milk recorder, and were able to recommend a sufficient number of qualified recorders. Five women recorders were employed in 1936 and 51 men recorders. In this connection the Committee are indebted to the West of Scotland Agricultural College for giving special courses of instruction for milk recorders to meet the Association's requirements. Only one special course was required in 1936—namely, in December. Twenty-four selected candidates attended the course, and 16 obtained the certificate.

The Executive Committee purchased the supplies of milk-testing apparatus, sulphuric acid, and amylic alcohol for local societies, as in previous years.

The system of surprise check tests, introduced in 1920, was continued in 1936. The total number of check tests made by recorders during the season was 1136. In no instance in 1936 was the average milk yield for the herd more than 3 lb. milk daily less on the occasion of a check test as compared with the previous day. Only 4 herds showed an average of over 2 lb. less. In addition to the surprise tests arranged for and carried out by the recorders, the Assistant Superintendent made 50 special check tests of different herds. The results in most instances agreed very closely in regard both to average milk yields and fat percentages with those of the recorders' previous tests. Only 4 herds showed an average daily yield of over 2 lb. less on the occasion of a special check test, and no herd had an average of over 2 lb. more. With regard to average fat percentages, only 3 herds showed an average fat percentage of over .2 per cent lower, and 2 herds an average of over .2 per cent higher. With the exception of 5 herds, the average fat percentages were all within .2 of those obtained by the recorders at the previous tests.

With regard to the general conditions for milk production in 1936, the weather during the greater part of April was unfavourable, being cold, dry, and sunny, with frequent ground frosts. The drought continued during most of May and the month was on the whole not a good one for farming, crops, grass, and live stock being affected by the lack of moisture. Exceptional dry weather conditions continued throughout June in almost all parts of the country and pastures continued to

suffer. But unsettled weather prevailed in most districts throughout the month of July. Heavy rains were general and interfered seriously with hay-making, but pastures and root crops benefited greatly from the abundant moisture. Rains were frequent also during the earlier part of August, but fine weather set in towards the end of the month. August was more of a growing than a ripening month. During the first half of September, rain, fog, and the absence of drying winds seriously retarded the securing of grain crops, but a marked improvement in the weather towards the end of the month enabled farmers to complete harvesting in fairly good order. Favourable weather conditions continued during the greater part of October.

Grasses and clovers suffered considerably from cold and dry weather during the spring months, and by the end of May were less promising than usual. Hay was adversely affected by wet weather conditions during July, and the work of hay-making was difficult and protracted, crops in practically every district being considerably damaged before being secured. Yields generally were very considerably below those of an average year. Owing to severe cold weather and the absence of rain, pastures throughout the country continued to look bare until the end of June. Benefiting from wet conditions in subsequent months, grass made a good recovery, and in many districts pastures by the end of October were still plentiful. Dairy cows made fairly good progress during the earlier months of the year, but in June hand-feeding became necessary in many districts to maintain the yield of milk. July rains saved the turnip crop in many districts, growth generally by the end of the month being vigorous and healthy. Further improvement was noted during September. In most districts crops were quite up to the average. Taken on the whole, the year was not favourable for high milk yields; and it may be assumed that the average milk yield per cow in Scotland in 1936, as in 1935, was below average.

In the case of recorded herds, other conditions militated against a higher average yield. As in recent years, a considerable proportion of herds which had been recorded for a period of years were entirely dispersed, or for other reasons already referred to did not continue to be recorded, while a considerable number of "new herds," or herds tested for not more than three years, were included. The proportion of regular milk record herds was thereby correspondingly reduced.

The following table shows for each society or circuit the number and percentage of cows and heifers of each class in 1936 :—

Society or Circuit.	Cows and Heifers.				
	Number.			Per Cent.	
	Total.	Class I.	Class III.	Class I.	Class III.
Central and South Ayrshire—					
1. Ayr and Troon . . . . .	675	485	15	72	2
2. Cumnock and District . . . . .	623	509	5	83	1*
3. Girvan and District . . . . .	788	488	33	62	4
4. Kilmarnock and District . . . . .	727	579	1	86	...*
5. Mauchline and Drongan . . . . .	618	492	2	81	...*
6. Maybole and District . . . . .	852	640	16	75	2
7. Central Ayrshire No. 2 . . . . .	683	615	2	90	...
Central Scotland—					
8. Carluke and District . . . . .	822	572	14	75	2*
9. Dunblane and District . . . . .	728	503	25	69	3
10. East Kilbride and District . . . . .	870	483	22	62	3*
11. Falkirk and Linlithgow . . . . .	761	486	14	74	2*
12. Strathendrick . . . . .	797	512	18	66	2*
13. Dumbartonshire . . . . .	814	535	17	68	2*
Dumfriesshire—					
14. Mid Annandale . . . . .	977	570	12	60	1*
15. Upper Annandale . . . . .	979	580	50	61	5*
16. Upper Nithsdale . . . . .	913	622	23	72	3*
17. East Lothian and Border . . . . .	917	545	46	59	5
Fife—					
18. Dunfermline and Kirkcaldy . . . . .	834	516	11	71	1*
19. Cupar-Fife and Perth . . . . .	755	502	25	66	3
20. Highland . . . . .	677	370	23	55	3
21. Kintyre . . . . .	479	228	8	69	2*
22. Lesmahagow . . . . .	821	558	13	71	2*
23. Lower Wigtownshire . . . . .	1150	641	39	56	3*
North Ayrshire (John Speir)—					
24. Fenwick . . . . .	994	761	12	77	1
25. 'John Speir' . . . . .	734	492	14	67	2
26. Stewariton and Montgomerie . . . . .	923	629	10	78	1*
North of Scotland—					
27. Forfarshire and Kincardineshire . . . . .	829	566	9	72	1*
28. Aberdeen and District No. 1 . . . . .	861	427	39	54	5*
29. Aberdeen and District No. 2 . . . . .	906	579	21	65	3*
Renfrew and Bute—					
30. Bute and Inverkip . . . . .	692	449	17	65	2
31. Paisley and Kilmacolm . . . . .	700	456	9	69	1*
32. Renfrewshire (Upper Ward) . . . . .	636	377	12	64	2*
Rhins of Galloway—					
33. Kirkcolum and District . . . . .	1319	732	65	57	5*
34. Kirkmaiden and District . . . . .	1422	754	42	53	3
35. Luce Valley . . . . .	1266	638	41	50	3
36. Stranraer and District . . . . .	1298	717	53	55	4

Society or Circuit.	Cows and Heifers.				
	Number.			Per Cent.	
	Total.	Class I.	Class III.	Class I	Class III.
Stewartry of Kirkcudbright—					
37. Dalbeattie and New Abbey	979	526	41	54	4
38. Castle Douglas and New Galloway	1044	626	37	60	4
39. Castle Douglas and District	1055	344	138	33	12
40. Kirkcudbright and District	1232	703	38	57	3
41. Borge, Twynholm and Gatehouse	1061	727	16	69	2
Of all the cows and heifers tested in 1936	36,211	22,564	1051	64½	3*
Comparison with 1935	34,872	20,567	1200	61	3½*
Comparison with 1934	32,905	20,164	998	63	3*
Comparison with 1933	32,456	19,631	1061	62	3½*

\* Excluding heids tested during only a part of the recording season— 1099 cows in 1936

Reviewing the results of the 41 circuits as a whole, we find that, classifying on the new higher standards, of the total of 36,211 cows and heifers tested in 1936, excluding 1099 animals in herds tested during only a part of the season, and therefore not classified, 22,564 were included in Class I. and 1051 in Class III. This is equivalent to 64½ per cent in Class I. and 3 per cent in Class III. Thus, 64½ per cent of all the cows and heifers tested gave a milk yield equivalent to not less than 800 gallons containing 3·5 per cent milk fat in the case of a cow and 640 gallons in the case of a heifer; while only 3 per cent gave a milk yield equivalent to less than 531 gallons containing 3·5 per cent milk fat in the case of a cow and 426 gallons in the case of a heifer. In 1935, 61 per cent were eligible for Class I. and 3½ per cent were included in Class III.

The following table shows a comparison of the average results from 1914 to 1935 inclusive. For this comparison the milk records were classified on the lower standards adopted in previous years:—

[TABLE.



Year.	Cows and Heifers.		
	Total Number Tested.	Per Cent.	
		Class I.	Class III.
1935	34,872	73	2
1934	32,905	75½	1½
1933	32,456	75	1½
1932	31,415	72½	1½
1931	30,576	72½	1½
1930	30,720	70	1½
1929	30,898	68	1½
1928	30,293	66	2½
1927	29,459	65½	2½
1926	29,236	65½	2½
1925	28,410	60	5
1924	27,957	65	3
1923	26,952	65	2
1922	27,275	63	2
1921	26,752	58½	4
1920	24,191	55½	3½
1919	20,786	49½	4½
1918	17,827	49	5½
1917	19,564	50	4½
1916	22,702	53½	4½
1915	26,572	46	6
1914	26,424	39½	9

The average standard attained in 1936 was undoubtedly lowered by the inclusion of the larger proportion of "new herds" and by the adverse weather conditions already referred to, yet it will be observed that the proportion of animals qualifying for inclusion in Class I. in 1936, taking into consideration the higher standards now adopted, is the highest reached since the commencement of official milk recording thirty-three years ago.

It will be observed also that when classified on the lower standards previously adopted the proportion of Class I. cows and heifers to the total animals tested increased from 39½ per cent in 1914 to 75½ per cent in 1934, while the proportion of Class III., or obviously unprofitable, animals was reduced in the same period from 9 per cent to 1½ per cent. These figures indicate great improvement in recorded herds, yet do not represent the full extent of the progress made since the introduction of milk recording in 1903. It is estimated that milk record herds generally are at the present time giving higher average yields than unrecorded herds to the extent of considerably over 200 gallons per cow per annum.

Improvement from milk recording is not confined to herds

officially recorded in 1936. A very much larger number have been tested and recorded for longer or shorter periods since the Association's scheme of milk recording was introduced. And when we consider the spread or diffusion of the benefits arising directly or indirectly from milk recording, we find that these penetrate widely in various directions other than that of individual members of milk recording societies. For example, there is the effect on the remaining dairy herds of the country. The wide dissemination annually of milk record stock bulls and milk record cows for breeding purposes among untested herds alone must exercise an incalculable improving influence on a very large number of these herds. Such influence is increasing with the extension of the practice of using only milk record bulls in dairy herds.

There is also the powerful educational influence and force of example permeating and leavening the whole mass of dairy farmers, and creating a new habit of thought in the realm of milk production. If a census could be taken in this connection, it would probably be found that a considerable proportion of herd owners outside the membership of milk recording societies are in one way or another testing and recording the milk yields of their herds who would never have done so had systematic or official milk recording not been in operation. The same consideration applies to the more enlightened methods of selecting, breeding, and feeding on milk record lines which have been adopted in many herds not officially recorded.

There is another direction in which advantage from milk recording is penetrating widely beyond the ranks of milk recording societies. Increased efficiency in the production of milk lowers the cost to the urban populations, and some portion of the return from milk recording is handed on beyond the actual milk producers.

There remains a still wider aspect of the question. Large numbers of milk record bulls and young cows are exported annually, and go to maintain and improve the milking qualities of the dairy herds of the Empire.

The Association's activities are not confined to the official testing and recording of the individual milk yields, but are directed also to assisting the herd owners to improve their methods of production by means of the records obtained. The work is to some extent of an educative or advisory nature. Official recorders have to attend a course of instruction which includes the feeding and general management of the dairy herd, and are required to do all they can to interest and advise members in this connection. The Association have prepared and issued to all members a concise practical guide to feeding of dairy cows, containing a table of fifteen selected food mixtures adapted to different conditions, and recorders and

central staff take every opportunity of assisting members to follow the instructions given therein.

#### SCHEME OF PRIVATE OR UNOFFICIAL MILK RECORDS.

The Association's scheme of private or unofficial milk records, inaugurated in 1924, was continued in 1936 on the same lines as in previous years. The chief objects are to establish milk recording on a wider and more popular basis, and to induce a greater number ultimately to adopt the system of official authenticated milk records.

Milk recording under this scheme was administered directly by the Association. The following inducements were offered to members :—

- (a) The hire of a set of appliances for testing purposes free of annual charge, the member to upkeep the apparatus in good condition.
- (b) Byre sheets and record books free of charge, with stamped addressed envelopes for return of byre sheets.
- (c) All calculations in byre sheets and record books to be made in the Superintendent's office, and the sheets and record books to be returned to the herd owners duly extended and completed.
- (d) The total charge on members to be limited to an annual subscription to the Association at the rate of 1s. per cow tested.

Nine new members were enrolled for 1936. Six of the members were transferred to the scheme of official recording. The total membership for 1936 was 79, and the total number of cows included, 1804. This new scheme of recording had at the end of 1936 been the means of obtaining for official recording 57 new members of a very desirable type, which is one of the objects for which it was promoted.

There are several reasons why the membership under this scheme has not increased in recent years. The better milking herds are gradually transferred to official records. Further transfers have been arranged for season 1937. At the other extremity there are a considerable proportion of poor herds, the owners of which are evidently unduly discouraged by the low yields recorded, and apparently have not the mentality to appreciate the possibilities of effecting the much-needed improvement. Also, a number of members, after two or three years' experience, believe they can carry on recording on similar lines independently at smaller cost.

This scheme of unofficial recording is serving a useful purpose. For reasons already given, its effect must not be

measured merely by the number of herds included in any particular year; account must be taken of its educational influence and propaganda value. Thus a considerable proportion of the members who have withdrawn, and meantime severed their connection with the Association, have acquired the milk recording point of view, and ought ultimately to be found among members of milk recording societies. No fewer than 419 herd owners have been initiated in milk recording through its operation.

The following is a brief outline of the method of recording adopted :—

All cows in the herd yielding milk must be included in the record. Each cow must be clearly distinguished in the byre by a stall number on the wall. On the occasion of a test the cows must be milked in the same rotation evening and morning, and care must be taken that the milk of each cow for twenty-four hours, and for twenty-four hours only, is included in the test. The owner, or his agent, is required to weigh the milk of each cow evening and next morning by means of the spring balance and pail provided, once every twenty-one to twenty-eight days, and to enter the results and other necessary particulars in the byre sheet provided by the Association; and each byre sheet must be signed by the owner, or on his behalf, as correct in respect of all entries made. The byre sheet is sent by first post to the Superintendent, and calculated and extended by the Association's staff, and returned to the owner as soon as completed. A milk record book for each herd is written out in the Association's office. The record books are closed at the end of the recording season as at 30th November, and the results summarised and entered in special summary sheets. The record books and copies of the summary sheets, when completed and checked, are sent to the respective owners of the herds.

It must, of course, be clearly understood that the milk records compiled under this scheme are purely unofficial unauthenticated records, and have no connection with the official authenticated milk records of the Association. But from letters received and opinions expressed by members, it is evident that very useful guidance may be obtained from the records.

#### PROSPECTS FOR 1937.

Propaganda on an extensive scale is carried through each year. Applications for membership, or for further particulars, are invited through press advertisements, articles, circular letters, broadcast talks, bills posted at auction marts, &c. All members of the Association, members of local milk recording

societies, members under the scheme of unofficial records, and milk recorders are requested individually to assist in obtaining new members for either scheme in their respective districts, and to send to the Superintendent the names and addresses of local dairy farmers likely to be interested. In this way a comprehensive propaganda list of possible new members is compiled. To each address on this list are sent circular letters and propaganda literature giving particulars of both systems of recording and enumerating the advantages to be obtained, and a form of application. Following on the distribution of literature, personal visits are made to most of the farms by the Association's staff, and the herd owners are classified into three groups according to the degree of probability of their becoming members. Wherever any particular interest is shown, the visit is repeated until a definite decision is reached. By this method, continued over a number of years, dairy farmers who were formerly quite indifferent have been enrolled as new members.

Similar efforts were made to obtain additional applications for membership of local societies in 1937. With the scheme of private or unofficial milk records in operation, it was possible to carry out propaganda work for both schemes simultaneously, and over 2000 circulars and other letters, with propaganda literature, were distributed to dairy herd owners throughout Scotland. In addition, 844 personal visits were made. The number of new members for official records for season 1937 obtained to date is 66, and a considerable number of prospective new members for the year following have also been obtained.

All the local societies of 1936 have continued. The Central Scotland Society, with five circuits, found it necessary owing to increase in membership to form a sixth circuit, to which three surplus members of the Lesmahagow Society were transferred. The Rhins of Galloway Society also decided to form a new circuit, increasing the number of their circuits from four to five. The number of recorders' circuits in 1937 is 43, two more than in the previous year. The total number of herds and of cows officially tested will also show increases.

The Committee are in a position to recommend a sufficient number of qualified recorders. All vacancies at the beginning of the year have been filled, and there remain a number of approved recorders on the waiting list. The Committee have arranged for supplies of sulphuric acid, amylic alcohol, and milk testing apparatus for local societies in 1937.

With regard to unofficial records, seven new members have been enrolled. Four of the members and two former members have been transferred to the scheme of official recording for season 1937, making a total of 63 transferred. The total

membership for unofficial recording at present is 75, with approximately 1712 cows.

### GENERAL REVIEW.

Milk recording has had a great influence on milk production in Scotland during the last three decades, and it may be of interest to review briefly at this stage its origin, early history, and development, and the relative importance it has attained in the dairying industry.

The conditions prevailing before milk recording was introduced should first be considered. Progress in agriculture was being sought. The agricultural colleges were still in their infancy and had a direct influence on only a very limited number of agriculturists. Efforts were being made largely through the holding annually of agricultural shows. But, so far as milk production is concerned, it cannot be said that satisfactory results were being achieved. Though annual shows of dairy cattle of all ages had been held over a long period of years no appreciable improvement in the milking qualities of the herds generally was being effected. The "Ayrshire" was practically the only dairy breed in the West of Scotland, and the main result of the agricultural shows was that Ayrshires were being bred more and more on show lines which, to say the least, did not conform in some important respects to the requirements for increased milk production. An ominous feature was the fact that entry of new blood to the Ayrshire Cattle Society's Herd-Book was entirely dependent on the animals having taken prizes at these annual shows. There had already sprung up, however, a healthy discontent with this condition of things among a section of milk producers, who realised that after all was said the only justification in the long run for a cow like the Ayrshire, which was not of the nature of a beef breed but was essentially a dairy cow, was as a producer of milk, whether or not she was a winner of show prizes. The now famous controversy between the enthusiasts for the show type and the upholders of the milk type had already commenced, and an urgent need had arisen for a decided stimulus to milk production on utilitarian lines. A more worthy standard of values in the appraising of dairy stock was necessary if the milking qualities of the Scottish dairy herds were to be even maintained. It was under conditions such as these that the idea of milk recording, in some form on a public basis arose; an authenticated milk record would be of much greater value as a measure of a dairy cow's inherent worth than a show prize card.

Some of the more enterprising dairy farmers made records of the milk yields of their cows privately, for their own use,

in order to enable them to know the milking qualities of all the cows in their own herds, but this form of milk recording entailed a good deal of trouble to the herd owner, and the records being unauthenticated and without milk fat percentages were not of the same value as records made by a trained official under the auspices of a public body.

A movement was initiated in Denmark in 1894 to institute milk recording on co-operative lines. The main object was the fostering and improving of the milking qualities of dairy cows by careful selection and more skilful breeding. The plan proved very successful, and since that time systematic milk recording on similar lines has spread widely in dairying countries, including the British Isles. Of the latter, Scotland was the first to adopt the practice of recording.

Systematic milk recording has been carried on in Scotland since 1903. The present system has developed from the scheme of the Highland and Agricultural Society of Scotland in 1903, initiated by the late John Speir, to whom all the more credit is due in that he was not himself a breeder of dairy cows and was, therefore, financially disinterested. In 1903, the Highland and Agricultural Society set aside a sum of £200 for the promotion and encouragement of systematic milk recording, and continued to do so annually for the next nine years. A grant of money was given to each group of farmers joining together to form a local society and employing a trained recorder approved by the Highland and Agricultural Society for the purpose of making milk records. The recorder was to visit the herd of each member of a local society in rotation at intervals of 14 days, and compile records of the weight and fat percentage of each cow's milk. Record forms were supplied by the Highland and Agricultural Society.

The movement was fairly well supported during the first season. Three societies were formed and 34 herds comprising 1342 cows tested. But only one society continued its operations in the following year and only 12 herds were tested. In 1905, two societies conducted tests and 30 herds were recorded. There was, however, a considerable advance in 1906; the number of societies increased to 5, the number of herds to 76, and the number of cows to 2688. The intervals between the tests were extended, in the case of two societies to 21 days, and of one society to 28 days. In 1907, seven societies conducted the tests, comprising 109 herds and 3931 cows. By the end of this year the Highland and Agricultural Society had carried on the pioneer work in milk recording for a period of five years, and they considered that the movement had now become sufficiently established in popular favour to be certain to come more and more into prominence as the years advanced. They were of opinion, however, that the scheme would probably be extended more rapidly if the

work were more directly in the hands of the dairy farmers themselves. At the end of 1907 the administration of milk recording was transferred to a special body termed "The Ayrshire Cattle Milk Records Committee." The Highland and Agricultural Society, however, continued the annual grant of £200 to the Committee for the next four years.

A decided impetus was given to milk recording in Scotland by the formation of this Committee. In 1908, thirteen societies carried on milk recording, and by 1909 the number of herds tested had increased to 212 and the number of cows to 9202. A new annual grant of £40 was received in this year from the Ayrshire Cattle Herd-Book Society. In 1910, the name of the Committee was changed to "The Scottish Milk Records Committee." It was recognised that all official milk recording in Scotland should be conducted on a common system and administered by one body, and that all the breeds of dairy cattle in Scotland should have their interests served by delegates on the Scottish Milk Records Committee.

The next change of importance took place in 1912 when the first State grant was obtained from the Development Commissioners, and the West of Scotland Agricultural College was authorised to expend money on the encouragement of milk recording. The Governors of the college made an annual grant of £900 on agreed conditions to the Scottish Milk Records Committee, and a supervisor of milk recording was appointed. The Ayrshire Cattle Herd-Book Society continued their grant of £40. By 1913, the number of local milk recording societies had increased to 32, the number of herds tested to 581, and the number of cows to 22,816. The Scottish Milk Records Association, as now constituted, was formally created on 28th February 1914 in accordance with a scheme approved by the Board of Agriculture for Scotland and the Development Commissioners, and an annual grant of £2000 was obtained from the Development Fund. The constitution of the governing body was extended so as to include representatives for the whole of Scotland. More complete arrangements were made for the direction and supervision of the recording and the checking of the records by the Association's officials and staff. An annual Government grant, varying in amount, has been received regularly since that date; in recent years this grant has been obtained from the Treasury through the Department of Agriculture for Scotland. The grant for 1936 amounted to £2619. The Ayrshire Cattle Herd-Book Society gave an annual grant of £40 till 1917, and thereafter an annual grant of £50 till 1930.

The method of recording evolved will be already familiar to most of our readers; it is described in some detail on page 221 of this report. New features have been introduced from time to time as experience has suggested, also many improve-



ments in details of administration, and the authenticated milk records of the Association have gained a high reputation at home and abroad. The annual Government grant is sufficient to cover the cost of central administration, supply free record sheets and books, and provide the necessary milk testing appliances free of annual charge except for upkeep, and a small money grant of approximately 9s. to each member towards the cost of the recorders' surprise check tests described earlier in this report. The income of the local society is obtained by a levy on each member; in some cases a uniform charge per member, but in most instances proportionate to the number of cows in the milking herd. Where the herds are not widely scattered the annual contribution of a member to his local society is at the rate of approximately £6 for a herd of 40 cows, or 3s. per cow. But in some instances the cost is considerably greater. Each member has to provide board and accommodation overnight at the farm for the recorder on each visit.

A distinctive feature of milk recording in Scotland is that the official records are entirely the work of trained official recorders. Another distinctive feature are the surprise check tests described on page 223. The records of each cow are checked in this way two or three times throughout the year. As a result of this system of check testing each page of the milk record book contains two or three lines of entries in red, comparison of which with the immediately preceding entries provides valuable evidence as to the genuineness of the milk records. In addition to the surprise check tests made by the recorder, a number of independent surprise tests are made by the Association's staff in order to check the recorder's work.

In Scotland there are two schemes of milk recording in operation, both under the direction of the Scottish Milk Records Association, the scheme of official authenticated milk records, and the scheme of private or unofficial milk records inaugurated in 1924. The chief object of the latter is to establish milk recording on a more popular basis. Under the scheme of unofficial milk records the farmer himself weighs the milk yields of his cows once every twenty-one or twenty-eight days by means of the apparatus supplied by the Association, and forwards the particulars to the headquarters of the Association to have the necessary calculations made. Fuller particulars of this system of recording will be found on page 233. The total charge on members is limited to an annual subscription to the Association at the rate of 1s. per cow, and there is no recorder to be accommodated. No certificates of authenticity, however, are issued, the records being intended merely for the information of the farmers concerned. The members under this scheme are expected to transfer later

to official recording. Already 419 herd owners have been initiated in milk recording through its operation.

The following table illustrates the rate of development of the official milk record movement in Scotland :—

Year.	Number of Societies.	Number of Herds Tested.	Number of Cows Tested.
1903	3	34	1,342
1908	13	193	8,132
1913	32	581	22,816
1923	40	703	26,952
1936	41	800	36,211

The total number of purely dairy cows in the country has not been definitely ascertained, but is probably not more than 250,000.

An impression of the improvement effected in the milking qualities of officially recorded herds may be obtained from the following table :—

Year.	Total Number of Cows and Heifers Tested.	Percentage of Cows and Heifers in Class I.	Percentage of Cows and Heifers in Class III.
1910	9,514	25	11
1914	26,424	39½	9
1922	27,275	63	2
1930	30,720	70	1½
1934	32,905	75½	1½

It will be observed that in 1910, seven years after the inauguration of milk recording, of about 10,000 cows tested only 25 per cent were in Class I. ; by 1914 there were almost 40 per cent in Class I., while in 1934, of 33,000 cows 75½ per cent were in Class I. During this period not only has the total number of cows tested annually been more than trebled, but the percentage of Class I. cows has been trebled also. In other words, the number of milk recorded Class I. cows in Scotland in 1910 was approximately 2500 ; to-day it is almost 25,000.

During the period under review milk recording has spread widely in other countries. We hope to deal with this aspect of the subject in more detail on a future occasion. Some four and a half million cows have been submitted to milk recording tests in thirty-four countries in different parts of the world. Milk recording has undoubtedly been of quite special value in connection with the increase of the national wealth of the

countries concerned. It has served not merely to raise, and to reduce the cost of, the milk production of the four and a half millions of cows for which records are kept, but the offspring and ancestry of these cows have also gained in value as a result of the determination of their yield performances. With the aid of milk recording it has been found possible to distinguish high and low-yielding strains and at the same time to eliminate from the breeding herds those animals the maintenance of which has been proved to be uneconomic.

## ANALYSES FOR MEMBERS DURING 1936.

By Dr J. F. TOCHER, Aberdeen, Analyst to the Society.

THE number of samples received during 1936 was 208, of which 33 were fertilisers, 34 were feeding-stuffs, 48 were milks, 46 were waters, 31 were examinations for poisons, and 16 were miscellaneous samples. The following table (Table I.) shows the number and nature of the samples analysed during the past six years :—

TABLE I.

	1936.	1935.	1934.	1933.	1932.	1931.
Fertilisers . . .	33	30	38	41	45	32
Feeding-stuffs . . .	34	62	35	37	32	43
Waters . . .	46	44	52	47	44	53
Other samples—						
Milks . . . )	95	106	102	115	97	125
Poisons . . . )						
Miscellaneous . . . )						
Total . . .	208	248	227	240	218	253

### FERTILISERS.

*General.*—The fertilisers examined may be classified as follows :—

TABLE II.

Compound fertilisers . . . . .	15
Limes . . . . .	5
Slags . . . . .	2
Bone meals . . . . .	5
Bone and meat manures . . . . .	2
Steamed bone flour . . . . .	1
Ammoniated sulphurophosphate . . . . .	1
Sulphate of potash . . . . .	1
Potassic mineral phosphate . . . . .	1

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The average composition of the complete compound fertilisers analysed was found to be 5.9 per cent nitrogen, 6.7 per cent soluble phosphoric acid, 3.4 per cent insoluble phosphoric acid, and 7.9 per cent potash. The proportion of nitrogen in the compound fertilisers ranged from 3.1 to 8.4 per cent. The variation in soluble phosphoric acid was from 1.6 to 8.6 per cent, while that of insoluble phosphoric acid was from 1.1 to 11.9 per cent. The proportion of potash varied from 0.75 to 19.8 per cent. The following table (Table III.) shows the results of analyses of samples of compound fertilisers analysed during the year :—

TABLE III.

				Nitrogen.	Soluble phosphoric acid.	Insoluble phosphoric acid.	Potash.
Potato manure	.	.	.	8.42	7.00	1.49	7.49
"	"	.	.	7.68	5.73	4.50	5.04
"	"	.	.	5.69	8.03	3.84	6.26
"	"	.	.	5.38	7.04	5.16	6.39
"	"	.	.	5.96	6.22	4.16	8.91
"	"	.	.	5.42	6.74	2.77	10.00
"	"	.	.	4.41	8.61	1.14	5.46
"	"	.	.	5.45	6.35	2.85	8.62
"	"	.	.	5.22	6.86	4.14	6.09
Compound manure	.	.	.	7.03	6.51	3.50	6.00
"	"	.	.	5.32	3.82	3.37	19.77
"	"	.	.	4.71	7.68	3.42	5.27
"	"	.	.	6.86	1.60	8.49	0.75
"	"	.	.	3.12	..	11.94	12.84

The fertilisers analysed included, in addition to the usual compound mixtures, samples of basic slag, bone meal, meat and bone manure, ammoniated sulphurophosphate, and lime. The average composition of mixtures intended for the potato crop was : nitrogen, 5.96 per cent ; soluble phosphoric acid, 6.95 per cent ; insoluble phosphoric acid, 3.34 per cent ; and potash, 7.14 per cent. Two compound fertilisers were analysed in order to determine what proportions of potash in the samples were sulphate of potash. The first sample was a mixture purporting to contain 20 per cent sulphate of potash, but the purity of the sulphate (*i.e.*, the proportion of pure potassium sulphate in the commercial article) was not stated. The sample was found to contain 6.85 per cent chloride of

potash (equal to 4.33 per cent potash) and 4 per cent of commercial sulphate of potash of 90 per cent purity, the equivalent of which is 48.5 per cent potash. The sample was thus below the guarantee for commercial sulphate of potash by 16 per cent. The second sample was found to contain 5.75 per cent potassium chloride and 10.86 per cent commercial potassium sulphate. The total amount expressed as potash was 8.91 per cent. A sample of ground lime was analysed, and was found to contain only 32 per cent of caustic lime. Ground lime is sold under various guarantees—60 per cent, 70 per cent, 76 per cent, and even 94 per cent. Other samples of ground lime analysed were found to contain high proportions of caustic lime. A sample of ground limestone was found to contain 80.8 per cent calcium carbonate, and was below the guarantee of 96.1 per cent to the extent of 15.3 per cent. The sample contained 15.76 per cent of silica. A sample of fermented bone meal was found to contain 26.1 per cent total phosphoric acid. The proportion of citric soluble phosphoric acid was 21.4 per cent. Thus 82 per cent of the total phosphoric acid was citric soluble. A sample of Indian bone meal was found to contain a high proportion of insoluble phosphate. Samples of crude material were analysed and advice given in order that the substances could be used as fertilisers. Two compound fertilisers were found to be below the calculated guarantee in both nitrogen and potash. Valuations were supplied to the buyers. Two samples of slag were found to contain 5.6 and 4 per cent of phosphoric acid respectively. I reported that the samples were not worth the cost of grinding if they were to be used for agricultural purposes.

#### FEEDING-STUFFS.

Thirty-four samples of feeding-stuffs were analysed during the year, including the usual compound cakes and meals and most of the concentrates in use at the present time.

The following table (Table IV.) shows the composition of the chief feeding-stuffs analysed :—

[TABLE IV.]

TABLE IV.

	Oil.	Albu- minoids.	Phos. Acid.	Salt.	Ash.	Moist.
Meat and bone meal	9.77	43.62	14.97	..	..	..
Meat and bone meal	10.37	51.00	11.39	..	..	..
Meat and bone meal	11.30	50.12	12.18	..	..	..
Meat and bone meal	12.57	50.56	10.35	..	..	..
Meat and bone meal	10.92	51.00	10.59	..	..	..
Meat and bone meal	13.57	44.19	10.68	..	..	..
Meat and bone meal	10.37	45.69	13.97	..	..	..
White fish meal	4.03	61.05	8.71	0.23	..	9.55
			Soluble Carbo- hydrates.	Fibre.		
Compound feeding-stuff	17.08	20.12	36.16	4.60	7.69	14.35
Compound feeding-stuff	17.24	18.37	45.27	5.80	4.50	8.82
Compound feeding-stuff	5.70	22.94	51.72	4.42	5.65	9.57
Mixed feeding-stuff	3.93	15.06	56.93	5.93	3.53	14.62
Dairy mixture	3.95	24.12	47.47	9.22	3.62	11.62
Milk equivalent	5.11	20.94	58.86	0.56	5.50	9.03
Robson's dairy nuts	5.47	20.38	48.09	5.93	6.99	13.14
Linseed cake	8.23	28.25	..	..	..	..
Cod liver oil thriving mixture	9.77	15.25	..	4.53	..	..
Lentil offal meal	1.08	22.81	54.15	7.83	4.77	9.36
Soya bean meal	0.72	45.13	30.95	4.94	5.26	13.00
Pig meal	2.60	18.81	..	4.00	..	..
Pig meal	2.50	18.19	..	3.17	..	..
Pig meal	2.38	16.37	..	3.03	..	..
Pig meal	4.21	14.69	..	3.84	..	..
Pig fattening meal	3.55	15.75	60.55	7.93	4.35	11.87
Laying meal	3.35	16.06	..	4.58	4.12	..
Laying meal	4.95	14.94	..	5.82	4.78	..
Barley meal	2.02	10.27	67.08	4.82	2.90	12.31
Barley meal	1.86	12.50	64.96	6.07	3.00	11.71
Barley meal	2.06	11.35	67.49	4.19	2.97	11.94
Barley meal	1.73	10.16	68.05	4.86	2.70	12.50
Compound cake	5.78	21.44	..	7.53	..	..
Compound cake	5.11	21.44	..	7.11	..	..
Fish heads	7.16	21.13	..	..	..	62.95

The samples of feeding-stuffs analysed included pig meal, meat and bone meal, lentil offal meal, soya bean meal, laying meal, dairy nuts, white fish meal, seed cakes such as linseed, and compound cakes. The average proportions of the constituents of barley are 1.5 per cent oil, 9 per cent albuminoids, 68 per cent carbohydrates, 4.5 per cent fibre, 2.6 per cent mineral matter, and 14.4 per cent moisture. The samples analysed were found to be of good quality and slightly above the average in all the constituents. A sample of white fish meal was found to contain a very low proportion of salt, only 0.23 per cent being present. A ration containing two parts oats, two parts flaked maize, and one part white fish meal is now being used in cases of mortality among in-lamb ewes. The ailment causing death is known as 'pregnancy toxæmia.'<sup>1</sup> The ration should be fed to ewes during the last four weeks

<sup>1</sup> See Mr Wannop's bulletin on "Mortality Amongst In-Lamb Ewes," North of Scotland College of Agriculture, December 1936.

of pregnancy, but where losses have been severe the ration should be given during the last six weeks of pregnancy. The sample of fish heads, when dried to contain 12 per cent moisture, was found to contain 17 per cent oil, 50.2 per cent albuminoids, and 14 per cent phosphate of lime. Owing to the high proportion of oil when the material was dried, its use could not be recommended as a feeding-stuff but only as a fertiliser. The average composition of samples of dried grass meal analysed was found to be : oil, 3 per cent ; albuminoids, 17 per cent ; soluble carbohydrates, 44 per cent ; fibre, 18 per cent ; ash, 9 per cent ; and moisture, 9 per cent. The proportions of carotene were also determined, since this substance, the precursor of vitamin A, is important, especially for milk production. Dried grass meal, if used as part of a ration during the winter months, imparts a rich yellow colour to milk due to the action of carotene, and is, therefore, a valuable commercial asset in addition to furnishing a growth-promoting vitamin constituent.

### MILKS.

Forty-eight samples of milk were analysed during the year. The number of samples found to be below the prescribed presumptive limits in butter-fat, or solids-not-fat, or both butter-fat and solids-not-fat, was nineteen, as against eleven last year. Nine samples were found to be low in fat, six in solids-not-fat, and four in both fat and solids-not-fat. The proportions of fat in the samples varied from 0.85 to 5.80 per cent ; while that of solids-not-fat ranged from 7.26 to 9.57 per cent. Eighteen samples were analysed for fat and solids-not-fat, while thirty were analysed for fat only. The following table (Table V.) gives the results of analyses of the eighteen samples which were sent in for complete analysis :—

TABLE V.

No.	Fat, per cent.	Solids-not-fat, per cent.	No.	Fat, per cent.	Solids-not-fat, per cent.
1	2.52	8.15	10	3.52	8.61
2	2.80	8.30	11	3.42	8.72
3	3.15	8.47	12	3.30	8.74
4	4.00	8.24	13	3.02	7.29
5	2.30	8.00	14	3.17	7.26
6	2.51	8.48	15	5.80	9.57
7	2.60	8.66	16	3.62	8.67
8	3.00	8.95	17	4.50	8.44
9	3.50	8.53	18	3.45	8.35



The following table (Table VI.) shows the nature of the distribution of butter-fat and solids-not-fat in these samples :—

TABLE VI.

Butter-fat percentage.	Frequency.	Percentage of the total.	Solids-not-fat percentage.	Frequency.	Percentage of the total.
under 1	..	..	under 7	..	..
1 to 2	..	..	7 to 7.5	2	11.10
2 to 3	5	27.77	7.5 to 8	1	5.56
3 to 4	11	61.11	8 to 8.5	7	38.89
4 to 5	1	5.56	8.5 to 9	7	38.89
5 to 6	1	5.56	9.5 to 10	1	5.56
	18	100.00		18	100.00

## WATERS.

Forty-six samples of water were sent in for analysis during the year. When samples of water are analysed the constituents determined are total solids, chlorides, free ammonia, albuminoid ammonia, nitrites, nitrates, poisonous metals, organic matter, phosphates, and relative alkalinity or acidity. Relatively acid waters act on metallic lead and other poisonous metals. Waters of bad quality contain relatively high proportions of free ammonia (fresh sewage), albuminoid ammonia (surface water and sewage), and poisonous metals. The following table (Table VII.) shows the proportions of these substances together with the reaction and the proportion of nitrates, in fourteen samples found to be of bad or doubtful quality :—

TABLE VII.

No.	Free Ammonia	Albuminoid Ammonia.	Nitrates.	Poisonous Metals	Reaction.
1	.6180	.1200	.32	None	Neutral.
2	.0014	.0170	.56	None	Slightly acid.
3	.0094	.0188	.04	None	Very slightly acid.
4	.0040	.0150	.48	None	Slightly acid.
5	.0012	.0290	.48	None	Very slightly acid.
6	.0150	.0056	Neg.	None	Slightly acid.
7	.0310	.0360	.02	None	Very slightly acid.
8	.0190	.0056	.08	None	Very slightly acid.
9	.0074	.0210	.14	None	Very slightly acid.
10	.0020	.0560	.56	None	Very slightly acid.
11	.0004	.0210	Neg.	None	Very slightly acid.
12	.0800	.0520	.02	None	Very slightly acid.
13	.0080	.0144	.24	None	Very slightly alkaline.
14	.0208	.0190	.60	None	Very slightly acid.

The remaining samples were found to be suitable for domestic use. One sample was reported of bad quality, not only

because of the presence of sewage but also because it contained two parts per million of dissolved lead. Occasionally samples from newly dug wells show distinct evidence of pollution, probably due to the infiltration of surface water. The pollution may, therefore, be of a temporary character, and members are advised to draw another sample after provision has been made to exclude surface or sub-surface water.

### POISONS.

Among the samples examined for poisons, lead was found to be the cause of death in three cases and strychnine in one case. In a number of cases, feeding-stuffs unaccompanied by stomach or bowel contents were sent in for analysis. It is particularly desirable in all cases of suspected poisoning to send the stomachs and portions of alimentary canals of the carcasses after they have been examined by the veterinary surgeon. Poisoning by strychnine should in future be a rare occurrence. It is now impossible to purchase this powerful drug, as its sale is prohibited by law. Pharmacists may not sell strychnine, but may dispense medicaments containing this drug in the very minute quantities which medical practitioners may find it to be beneficial to their patients. A sample of linseed cake gave, on analysis, the fairly high proportion of .046 per cent of prussic acid. The linseed cake portion of a mixed feeding-stuff gave .043 per cent. No ill-effects were noticeable among live stock fed with these cakes.

### MISCELLANEOUS SAMPLES.

Among the miscellaneous samples was a remedy for maggot-fly which was found to contain, as active ingredients, about 61 per cent of sulphur, 15 per cent of arsenic, and 6 per cent of tar. A turnip disease is said to be due to a deficiency of the element boron in the soil. In order to determine whether or not the recommended portions of borax added to compound fertilisers caused a loss of ammonia, several analyses of mixtures were made. No loss of ammonia was detected in the compound fertilisers containing sulphate of ammonia and superphosphate.

## THE CEREAL AND OTHER CROPS OF SCOTLAND FOR 1936.

THE following comparison of the cereal and other crops of 1936 with those of the previous year has been prepared by the Secretary of the Society from answers to queries sent to leading agriculturists in different parts of the country.

The queries issued by the Secretary were in the following terms :—

1. What was the quantity, per imperial acre, and quality of grain and straw, as compared with last year, of the following crops ? The quantity of each crop to be stated in bushels. What quantity of seed is generally sown per acre ?—(1) Wheat, (2) Barley, (3) Oats.
2. Did the harvest begin at the usual time, or did it begin before or after the usual time ? and if so, how long ?
3. What was the quantity, per imperial acre, and quality of the hay crop, as compared with last year, both as regards ryegrass and clover respectively ? The quantity to be stated in tons and cwts.
4. Was the meadow hay crop more or less productive than last year ?
5. What was the yield of the potato crop, per imperial acre, as compared with last year ? The quantity to be stated in tons and cwts. Was there any disease ? and if so, to what extent, and when did it commence ? Were any new varieties planted, and with what result ?
6. What was the weight of the turnip crop, per imperial acre, and the quality, as compared with last year ? The weight of the turnip crop to be stated in tons and cwts. How did the crop braird ? Was more than one sowing required ? and why ?
7. Were the crops injured by insects ? State the kinds of insects. Was the damage greater or less than usual ?
8. Were the crops injured by weeds ? State the kinds of weeds. Was the damage greater or less than usual ?
9. Were the pastures during the season of average growth and quality with last year ?
10. How did stock thrive on them ?
11. Have cattle and sheep been free from disease ?
12. What was the quality of the clip of wool, and was it over or under the average ?

From the answers received, the following notes and statistics have been compiled :—

### EDINBURGH DISTRICT.

**MID-LOTHIAN.** *Wheat*—48 bushels per acre ; straw, 40 cwt. ; seed sown,  $3\frac{1}{2}$  bushels per acre. *Barley*—48 bushels per acre ; straw, 20 cwt. ; seed sown, 3 bushels per acre. *Oats*—58 bushels per acre ; straw, 25 cwt. ; seed sown, 4 bushels per acre. *Harvest*—Began about the usual time. *Hay*—40 cwt. per acre of very good quality. *Meadow Hay*—Practically none grown. *Potatoes*—5 tons per acre, practically no disease. *Turnips*—12 tons per acre ; little resowing. *Insects*—Very little damage by insects. *Weeds*—No injury of any serious consequence. *Pastures*—Good. *Live Stock*—Throve well. Cattle and sheep free from disease. *Wool*—Average clip of good quality.

**WEST LOTHIAN.** *Wheat*—32 to 38 bushels per acre ; grain and straw of poor quality, being badly weathered ; seed sown, 4 bushels per acre broadcast, 3 to  $3\frac{1}{2}$  bushels per acre drilled ; a large acreage of late-sown wheat was ploughed up in the spring. *Barley*—36 to 42 bushels per acre ; grain and straw of poor quality ; seed sown, 3 to 4 bushels per acre. *Oats*—40 to 48 bushels per acre ; grain and straw of poor quality ; seed sown, 5 to 6 bushels per acre, according to variety. *Harvest*—Began about the usual time with oats and barley, wheat being three to six weeks late. *Hay*—Under average ; one of the poorest crops in recent years ; 1 ton 10 cwt. per acre of mixed quality, owing to broken weather. *Meadow Hay*—Not much grown. *Potatoes*—Earlies, 7 to 9 tons per acre ; lates, 10 to 12 tons per acre ; disease bad—the worst for years ; some fields affected to the extent of 50 per cent ; commenced with the rainy, warm weather about the end of August ; no new varieties planted. *Turnips*—In the north part of the county turnips were an excellent crop ; in the south a very poor crop ; north, say, 24 to 32 tons per acre ; south, 10 to 16 tons per acre ; crop braided well on light land ; some resowing on heavy land where the drought had got hold. *Insects*—Wheat suffered most from insects, especially the later sown, frit-fly being blamed for the damage. *Weeds*—Practically no damage by weeds. *Pastures*—Poor growth until the end of August ; quality poor. *Live Stock*—Did not thrive well until the later part of the season. Cattle and sheep were comparatively free from disease. *Wool*—Average clip of fair quality.

**EAST LOTHIAN (Upper).** *Wheat*—Yield of grain much smaller than for many years ; about 28 to 40 bushels per acre ; straw also very short ; seed sown,  $3\frac{1}{2}$  to 4 bushels per acre. *Barley*—About average crop ; 48 to 60 bushels, and grain generally of good quality ; seed sown, 3 to  $3\frac{1}{2}$  bushels per acre. *Oats*—Suffered from drought ; a short crop of both straw and grain ; 52 to 60 bushels per acre. *Harvest*—Started about a week later than previous year ; although grain was mostly cut in good order, it was much damaged in the stook by rain and foggy weather. *Hay*—Suffered from drought in early summer ; about 45 cwt. per acre. *Meadow Hay*—None grown. *Potatoes*—A good crop ; 8 to 10 tons per acre ; a good deal of blight, principally in Great Scots and King Edwards ; started end

of August in the bad harvest weather; good many Arran Banner and Doon Star now grown; much less leaf-curl and virus diseases; no sprain. *Turnips*—Much better crop than past two years; braided well; very little second sowing; damage by insects almost nil; 18 to 22 tons per acre. *Weeds*—Thin wheat badly affected by annual weeds. *Pastures*—Rather under average growth owing to drought. *Live Stock*—Throve well in early and late season. Cattle and sheep were free from disease. *Clip of Wool*—Rather over average.

EAST LOTHIAN (Lower). *Wheat*—The yield was less than last year by about 8 to 10 bushels; the average crop would probably not exceed 36 bushels per acre; straw also less than usual; would be about 34 cwt. per acre; the weather broke towards the end of harvest, but the wheat, though damp when secured, came out of the stack mostly in millable condition. Seed sown, 3 to 4 bushels per acre. *Barley*—Only a fair crop owing to drought; the break in the weather during harvest did considerable damage to the quality of a large proportion of the crop; yield about the same as last year; on good barley land, probably 48 to 56 bushels per acre, but many fields were much lighter; yield of straw normal; seed sown, 3 to 3½ bushels per acre. *Oats*—Another year of indifferent yields; many fields suffered damage from adverse harvest weather; grain would again be 8 to 10 bushels below average, and the quantity of straw was also less than usual. *Harvest*—Was again a record one for earliness; it commenced early in August; cutting was expeditiously done; then the weather broke and considerable damage was done to both grain and straw before it was got in. *Hay*—The yield was extremely light owing to dry weather, and few crops would exceed 2 tons per acre. *Meadow Hay*—None grown. *Potatoes*—A good crop; 8 to 10 tons per acre on good land; the crop suffered a little from drought early in the season, but with rain in August growth became luxuriant; a good deal of blight was to be seen on the haulms; spraying was practised more than usual, and where timeously undertaken did much good. *Turnips*—Better than last year, but turnip growing is still a precarious job in a great part of East Lothian owing to attacks by the turnip-midge. The attack this year was just as virulent as in the previous one, but copious rainfall in August and September did much to save the situation, although the crop was not nearly so sound nor so good as it looked. *Insects*—The chief insect attack was the turnip-midge on swedes, which for several years has been an increasing menace to turnip growing in this district. The damage was less, as stated above, than in former years, but the attack at the outset was just as virulent, and while it has been engaging the attention of scientists, no one has suggested a remedy so far. *Weeds*—Charlock is the most obvious weed in this district, but it was not worse than usual; the drought in June and July gave good opportunities for suppressing weeds in green crops. *Pastures*—Grass was scarce early in the season and plentiful later; the quality was quite up to the average. *Live Stock*—Throve well. Cattle and sheep were free from disease. *Clip of Wool*—About an average. *Sugar Beet*—Culture of sugar beet has now taken a good hold in the county. Several growers have regularly grown con-

siderable areas for a number of years. This year was one of the most successful. The best crops reached 16 tons per acre, and there were a few average yields, for considerable areas, of 14 tons per acre. Sowing on the flat has been introduced; earlier sowing is being practised, and skill in growing the crop derived from experience is having a favourable influence on yields.

### BORDER DISTRICT.

**BERWICKSHIRE (Merse).** *Wheat*—Broken, stormy weather immediately after the 1935 harvest seriously interfered with winter sowings, and though the ultimate total area, 7701 acres, under wheat showed a further expansion, a large part of the area was due to spring sowings. Unless winter wheats were in early, as after lea or taken as a cross crop, there was little opportunity to sow until the end of December. The early wheats came well away, but suffered subsequently from a continuous wet bed followed by severe black frosts. Weather was very severe the latter half of January and all February, and it was into March before sowings could be resumed. Spring wheats were promising from the start. Ears appeared round the third week of June, and harvest was general some eight weeks thereafter. All over the crop was quite useful, somewhat laid in places and difficult to handle satisfactorily in the prevailing damp conditions. Little serious damage was done; in other words it was mostly millable, but much of the first threshed grain was not in condition for marketing. Yields rather under the previous year, partly accounted for by the increased proportion of spring wheats as against winter; round 36 bushels per acre with a natural weight of 62 lb. Straw, 25 cwt. per acre of average quality. *Barley*—A slight increase raised the total acreage to 7801. Ploughing of turnip land was backward, so it was into April before much barley was sown. Brairds came nicely and the land worked down into a nice seed bed; the crop was promising; it shot out by the middle of June and harvest was general by mid-August.  $2\frac{1}{2}$  to 3 bushels is the usual sowing. At harvest the crop was very variable, in a few instances heavy and badly down, but generally on the light side. Little damage was done at harvest apart from discoloration, but some was carried too soon. The grain was well filled and of fair quality, but the total yield disappointing; 38 to 40 bushels, natural weight 54 lb. Straw short, 22 cwt. per acre, of average quality. *Oats*—With a further drop of almost 1400 acres the total acreage, 20,519, is the lowest on record. Little sowing was done before the end of March or early April. With so much frost the land worked very well, making an extra good seed bed; seeding varies with the variety, 4 bushels for potato, 5-6 for the others. This was also a very variable crop, the better lands showing an excellent bulk, and if troublesome to cut, stooked out well; other fields proved short and thin in ground. Harvest conditions were poor, discoloring much of the crop; there was also some sprouting. Cutting was general towards the end of August, when considerable patches had to be scythed out and generally a lot of extra labour was involved. The first cut fields were secured in good condition, though occasionally heating in the stack took place; the bulk of the crop, however, had to be secured

as best it could in damp dull weather and much was led in raw and out of condition. Yields varied very much from in the 30's to over 60 bushels per acre with a natural weight of 42 lb.; straw, 24 cwt. per acre of fair to poor quality. *Harvest*—If not as early as the two previous years, was general in the last half of August, fully earlier than the average, the few hot weeks in June doing most to hurry on growth and ripening. Weather conditions were good for cutting, but by the middle of September were damp, dull, and very still. Grain did not harden and seldom could any be got in first-rate order for carting, while much was stacked in bad condition, the work dragging on into October. *Hay*—The acreage was again rather higher, but the crop very much lighter than 1935 and was considerably deteriorated in the making. Cutting did not commence until well into June, when the first fields were ricked in good order, but the bulk of the crop once into July lay in a soaked condition for days on end, involving extra handling and a good deal of deterioration and much waste. The crop would average 28 cwt. per acre, and was well mixed with clover. The aftermaths came strongly away and gave a lot of eating. *Meadow Hay*—The quality suffered very much from the prevailing conditions, and the crop was later, resulting in a considerable waste, with a tonnage of round 23 cwt. per acre. *Potatoes*—Some of the previous year's shrinkage was made good, raising the total acreage to 2172. At planting time the land was in good order and work done satisfactorily, with plants soon showing above ground, growth continuing though never rapid, and during the hot spell in June drills opened up. One or two varieties like Kings did not show much strength of haulm and went down early, but mostly the crop made a fair show. Lifting started under favourable conditions, but as time went on land became wet, with tubers coming out dirty and rather wet; difficulty was also experienced through a shortage of gatherers. The crop is keeping very well in pits. Disease was slight, affecting Kings but little else. Little or no spraying, and no new varieties tried out on any scale. The crop averaged over 6 tons per acre and were of a good size. *Turnips*—A further drop of almost 100 acres brings the total acreage to the low one of 15,816. Against that there was an increase in other crops as Marrow Stem Kale, which has become increasingly popular and has done exceptionally well this year. Land for turnip sowing worked well, with plenty moisture to braird the seed; growth was slow at first and the earlier fields hung fire until approaching hoeing stage. There was little actual resowing, though some places were thinned out very much, chiefly by the beetle. Growth was strong after hoeing, and with broken weather and extra work required in the hay fields, difficulty was found in keeping weeds in check or in giving the necessary amount of labour to the crop. There were some outstanding crops of swedes, the best for some years. Yellows were not so regular and affected by finger-and-toe. All over the crop was very variable, from under 20 tons to 36 tons per acre. *Insects*—Apart from the beetle on turnips, swedes, and kale, and some signs of the Swede Moth—which, however, did not develop—there was no outstanding attack. Oats remained very free from wireworm or slug. *Weeds*—The season made it difficult to keep work forward, and weeds had every opportunity to develop amongst the root crops, while thistles were as bad as ever in the pasture.

*Pastures*—Growth was late and slow at first ; by early June pastures were in fine order when they received a check during the spell of hot weather ; from July onwards there was always plenty growth, and with the open autumn and winter stock have been carried through very easily to the end of the year ; all over a good grazing season. There was a remarkable growth of seeds after the nurse crop was cut ; seeds generally were good and stood an unusual amount of eating. *Live Stock*—Cattle and sheep did well. Ewe stocks were expensive to bring to lambing time, turnips were scarce, and an extra amount of hay and box feeds was consumed. Early lambing flocks suffered severely by weather conditions, lambs losing their flesh. The main flocks had a good lambing, plenty lambs and little trouble. At sale time lambs were above average and met a rising market which has held for the feeder, hogs on turnips having done well, but had to face a rise in all feed prices. Grass cattle fed well, particularly in the first half. Amongst breeding stock there was a good calving season and calves met a good demand. Outwintered cattle have had favourable conditions. Apart from normal losses amongst breeding stock health has been good ; lambs, and in many cases ewes, are now regularly drenched for worms ; foot-rot was very troublesome and maggot-flies most persistent. Grass sickness in horses was on the increase. This was the first year for compulsory measures to be taken against warbles in cattle ; experience has shown the practical difficulties of treating large numbers of grazing cattle. *Clip of Wool*—Below average in both quality and weight. *Sugar Beet*—This crop again proved fairly satisfactory ; the acreage jumped to 500 and growers did not experience the same difficulty in getting the crop off the land as in 1935. With increased experience and a type of beet better suited to our climate yields should improve.

**BERWICKSHIRE (Lammermoor).** *Wheat*—Considerably more wheat now grown ; both quality and quantity not nearly so good as last year ; the hard winter and cold spring made most crops very thin on the ground. *Barley*—Rather more grown ; yield and quality about an average. *Oats*—About an average crop in most parts of the district ; some fields rather thin ; not such a large crop as last year ; about 48 bushels per acre ; seed sown, 4 to 6 bushels. *Harvest*—Started about a week earlier than usual, though about the same date as last year. *Hay*—Rather light crop, especially where spring grazed with sheep ; about 30 to 35 cwt. per acre. *Meadow Hay*—Only a fair yield ; well got. *Potatoes*—Rather better yield than last year, and little damage by disease. *Turnips*—There was difficulty in obtaining a uniform braird ; the early sown turnips, on the whole, did well, but the later sown came badly and considerable resowing had to be done ; finger-and-toe still troublesome in some fields ; yield about 18 tons per acre. *Insects*—Turnip-fly troublesome on young turnips in June. *Weeds*—Did not appear to cause any great trouble among rotation crops ; thistles very bad on grassland. *Pastures*—Were very bare and poor in spring and early summer ; by end of July, however, they became good and remained so right on into winter ; long grazing season. *Live Stock*—After a rather difficult time in May and June, stock thrived well. Cattle and sheep fairly free from disease ; worms among lambs on old pasture did not appear to be so troublesome as last year ; grass sickness among



horses has now arrived in this district, and did considerable damage.  
*Clip of Wool*—Rather light clip of good quality wool.

**ROXBURGHSHIRE.** *Wheat*—An increased acreage grown; the early sown winter wheat yielded fairly—the later sown was a failure; spring sown wheat did quite well; average yield probably 25 per cent less than last year. *Barley*—Acreage small; similar to last year; yield about 25 per cent less than last year—36 to 40 bushels per acre. *Oats*—A heavy crop of straw, but yield of grain about 25 per cent less than last year. *Harvest*—Started about a week later than last year, and was prolonged owing to bad weather. *Hay*—A heavier crop than last year; except for early cut hay, which was well got, most of the crop was very badly spoilt by rain and was of very poor quality. *Meadow Hay*—Rather a light crop; quality varied, some being well got, but a great deal, owing to bad weather, was over-ripe when cut. *Potatoes*—A good crop; 8 to 12 tons per acre; disease was more prevalent than last year. *Turnips*—The best crop for some years; braided well and little resowing was necessary; where crops failed it was generally due to finger-and-toe disease. *Insects*—Crop not seriously injured by insects. *Weeds*—Less damage than usual from weeds. *Pastures*—Owing to very cold May, pastures were late in coming, and grass was scarce at that time, but later pastures grew well and were sufficient for the stock. *Live Stock*—After getting a check, due to barren weather in May, stock did well, but rather lacked bloom. Less disease than usual; lamb dysentery was not so serious as in previous years. *Clip of Wool*—A good clip of wool; slightly above the average.

**SELKIRKSHIRE.** *Wheat*—None grown. *Barley*—Very small acreage grown; average yield from 30 to 35 bushels per acre. *Oats*—Sowing was completed about the end of April, and braids generally looked healthy in June and July, but on light land finished a very moderate crop; from 30 to 40 bushels per acre, and on the poorer and high land from 24 to 30 bushels per acre; straw rather short; yield of grain below the average in quantity and quality. *Harvest*—Commenced about the last week in August, and with broken weather and an almost total absence of drying winds, took longer than usual. *Hay*—Ryegrass hay generally was a very poor crop and secured in bad order; about half the usual bulk—about 1 ton per acre. *Meadow Hay*—Was left growing longer than usual in the hope that the weather conditions would improve, but was secured generally in very poor condition. *Potatoes*—A much better crop than last year; from 5 to 8 tons per acre; not much disease; were pitted in dry condition, kept well, and of excellent quality. *Turnips*—Crop above the average; from 20 to 30 tons per acre; braided well; practically no resowing; never got a check, and finished the best crop in this district for years. *Insects*—Some damage done by turnip-fly and dry-rot and raan. *Weeds*—No injury of any consequence. *Pastures*—Were very bare practically all summer until the autumn, when they improved rapidly and provided ample keep for stock. *Live Stock*—Throve quite well, but maggot-fly was prevalent and mawks were the worst in living memory. Cattle and sheep free from disease. *Clip of Wool*—Very good quality, but lighter than usual in weight.

**PERBLESSESHIRE.** *Wheat*—Practically none grown. *Barley*—Very little grown; ripened very unequally on account of the excessive drought during the early summer; 36 to 40 bushels per acre. *Oats*—On good land an excellent crop, but on some farms, due to the drought, a lot of greens in the sample, and when that was the case the weight was lighter; new varieties, from 48 to 56 bushels; thin-skinned varieties, 36 to 40 bushels, and on late and poor land 28 to 32 bushels per acre. *Harvest*—An early harvest for this district, although a week later than the previous year; in early districts good weather for cutting, but a break in the weather caused the leading in to be prolonged and grain to be badly damaged; later districts experienced quite a good harvest. *Hay*—Ryegrass was one of the lightest crops for a long number of years, due to the excessive drought; not only was it a light crop, but it was badly damaged by the weather and of indifferent quality; about 1 ton per acre and in some districts not even that. *Meadow Hay*—Was much about the same as usual, and quality decidedly better than the ryegrass. *Potatoes*—Barely an average crop; dressed ware about 6 tons per acre; more disease than usual in some places; Kerr's Pink, as formerly, the most popular variety. *Turnips*—Swedes quite a good crop; about 40 tons per acre; free from disease on some farms and bad with finger-and-toe and dry-rot on others; yellows, with the good autumn, turned out an excellent crop, free from disease, and sound; in some places very difficult to get a braird, which necessitated two or three sowings. *Insects*—Turnip-fly was bad on the young plants, and in many places was the cause of frequent re-sowing. *Weeds*—Nothing unusual. *Pastures*—The county suffered tremendously from the early summer drought, and pastures were exceedingly bare, but after the rain came grass was very plentiful during the late grazing season. *Live Stock*—Notwithstanding the pastures being so bare, stock did exceedingly well, except that after the great rush of soft grass lambs were inclined to scour. Cattle and sheep free from disease; maggot-fly caused a great amount of work, and in some cases the damage caused to sheep was pretty bad. *Clip of Wool*—Quality was very good, but on account of the trying spring hill sheep especially clipped a lighter fleece than usual.

#### DUMFRIES DISTRICT.

**DUMFRIES (Nithsdale).** *Wheat*—None grown. *Barley*—None grown. *Oats*—Grain not so well filled; threshed lighter than last year; badly laid in lea fields, with a strong second growth. *Harvest*—Later than last year; general in first week of September; in higher districts cutting lasted till the end of September. *Hay*—Fair average crop; not very well got; more bad hay than good. *Meadow Hay*—About the same as last year; some meadow hay got fairly well where it was late cut. *Potatoes*—About 5 tons per acre; quality not so good as last year; fairly free from disease. *Turnips*—A very varied crop; about 18 tons per acre; brairded slowly owing to dry weather; a little resowing owing to drought and turnip-fly. *Insects*—Some trouble with turnip-fly. *Weeds*—Rather more weeds than last year. *Pastures*—Were better than last year and lasted well into the back-end; abundance of grass. *Live Stock*—Throve

very well. Cattle and sheep fairly free from disease. *Clip of Wool*—Good quality, but much lighter than last year.

**DUMFRIES (Eskdale).** *Wheat*—None grown. *Barley*—None grown. *Oats*—A good crop and a good average yield, but owing to the bad condition in which most oats were harvested they did not thresh well, and neither the oats nor straw were good; seed sown, 5 bushels per acre of Potato oats and about 6 bushels per acre of heavier oats. *Harvest*—About the usual time, but was very prolonged owing to bad weather. *Hay*—Lighter than last year; owing to dry weather in spring the crops were very light and not fit to cut early in the season; it then started to rain and grass began to grow; very bad hay weather all summer and very little good hay was got. *Meadow Hay*—Very bad hay mostly, but some good hay was got in October. *Potatoes*—Good crop and free from disease; were lifted in nice condition. *Turnips*—Much lighter crop than last year; in a few cases where the crop was in land which had not been in turnip for some years the crops were good; other fields were very poor, turnips being small and did not keep well; the majority of fields did not braird well owing to the dry weather and were sown two and three times. *Insects*—Turnip-fly was the only insect which did damage. *Weeds*—Very little injury by weeds. *Pastures*—An average growth after the rain came in end of June; quality quite as good as last year. *Live Stock*—Did very well, both sheep and cattle. Cattle and sheep were free from disease, excepting braxy amongst hill hogs. *Clip of Wool*—The quality of wool was quite up to the average, but it did not weigh as well as last year.

**KIRKCUDBRIGHTSHIRE.** *Wheat*—Acreage grown similar to last year; straw more bulky, but yield of grain less through lack of sun. *Barley*—Very little grown. *Oats*—Straw more plentiful, but yield of grain less; crops were badly lodged and difficult to cut; ears were not properly filled and really good samples of oats were scarce. *Harvest*—Began in the second week of August and was not finished until the fourth week of September. Wet and muggy weather caused much sprouting in the stook, and straw was of poor feeding quality. *Hay*—Ryegrass was generally a bulky crop; about 35 cwt. per acre, but owing to showery weather most of it was too long on the ground after cutting to be of good feeding value. *Meadow Hay*—Would average 2 tons per acre, but quality was poor owing to the bad hay weather; lots of ricks were not stacked until after harvest, when they were black on the outside and had taken in much rain. *Potatoes*—Not such a good yield; 2 to 3 tons less per acre, but healthy; more early potatoes grown round the shore farms, and they bulked well; generally sold by the acre to merchants, who lift them as in Ayrshire. *Turnips*—Did not lift as expected; the yield would be under 1½ tons; brairded well, came quickly to the hoe, and gave great promise early, but lack of rain in October kept them from swelling out; quite a lot of dry-rot was reported; it appeared in patches in the fields; raan was not so prevalent this year. Many farmers tried the new boron mixtures and were pleased with the results, but this did not prevent dry-rot. *Weeds*—With showery weather prevailing, weeds in the turnip crop were difficult to kill, and this crop was very dirty. *Pastures*—Were bare at the beginning,

but of good quality, and the autumn grass was most plentiful; the best back-end for years, and grass lasted right up to Martinmas. *Live Stock*—Did well; cows milked better in September and October than usual; sheep and cattle fattened well, aftermath being very good. Cattle and sheep fairly free from disease. *Clip of Wool*—Under the average on the hills, and average on low ground.

WIGTOWNSHIRE. *Wheat*—Very little grown. *Barley*—Very little grown. *Oats*—Lea oats, 24 bushels per acre; oats after green crop, 36 bushels per acre; seed sown—Potato oats, 5½ to 6 bushels per acre broadcast, 3 to 5 bushels per acre drilled; large varieties, 7 to 8 bushels per acre; good weather was generally experienced at seed time and the seed bed was dry; the braird was fairly good but was slightly checked by frost and dry weather in May. The crop was badly laid by the wet summer and lea crops especially were very difficult to cut. Much of it was cut and treated like hay, and in many places scythes were used. The best of the lea oats were lost and the straw was poor. *Harvest*—Began about a week or ten days later than usual, and all through the cutting damp or foggy weather was experienced. Cutting oats so badly laid was a most difficult task. Broken weather was experienced at stacking time, except in the later districts where some of the grain was got in in fairly good condition. Taking everything into consideration, it was a very bad and unprofitable harvest. *Hay*—An average yield; about 35 cwt. per acre; quality, owing to the long spell of wet weather, was much below average. *Meadow Hay*—About 25 to 30 cwt. per acre; quality was poor owing to the weather. *Potatoes*—Early potatoes were kept back a little by frost; started digging a light crop, but they improved later; 8 to 10 tons per acre; Epicures mostly were planted; late potatoes were a variable crop; some farms had a fairly good yield and others very poor, with some disease; owing to broken weather they were somewhat late in being lifted; 8 tons per acre. *Turnips*—12 to 16 tons per acre; generally speaking, early sown turnips brairded excellently and later sown ones were not far behind; all over the weather at thinning time was dry and suitable; later, wet weather set in and in many places this did not suit the crop; disease began to appear and turnips began to fall out; few places were able to store any quantity as they were too bad; a poor year for turnips. *Insects*—The damage to turnips by 'fly' was less than usual. *Weeds*—Owing to wet weather, redshank was fairly prevalent among turnips; dockens showed no decrease, but other weeds seemed to be kept in check better than is usual. *Pastures*—Owing to the dry cold spring, pastures were bare at first but came away later; on cold, late land they were not up to the average, chiefly because of want of sun. *Live Stock*—Generally did well; there was no trouble on farms during the summer as regards want of water, and on most dairy farms the yield of milk was much higher than the previous year. There were a good number of cases of grass sickness among horses and navel-ill among foals; in some places calves suffered badly from hoose and many were lost; there were more deaths among lambing ewes than usual from a kind of sleepy-sickness which appears about a fortnight before they are due to lamb. *Clip of Wool*—Quality and weight about the average.

## GLASGOW DISTRICT.

**AYRSHIRE.** *Wheat*—45 bushels per acre of medium quality, 61 lb. per bushel; straw, 25 cwt. per acre; seed sown, from 2 to 3 bushels per acre. *Barley*—Practically none grown. *Oats*—41 bushels per acre of medium quality, 38 lb. per bushel; straw, 23 cwt. per acre; seed sown, from 5½ to 7 bushels per acre. *Harvest*—Began about two weeks later than last year—about the middle of August—and was protracted on account of weather conditions, but the crop was secured in fair order. *Hay*—Generally a good crop, but the continuous rains made the securing difficult and large areas were rendered unfit for fodder; 25 cwt. per acre. *Meadow Hay*—A moderate crop of secondary quality. *Potatoes*—Better than last year by one to two tons per acre, lifting 6 to 8 tons per acre; some disease in the latter part of the season, but the losses were comparatively small; Doon Early, as a first early, was fairly successful. *Turnips*—The crop was variable, ranging from 12 to 28 tons per acre, due largely to disease affecting some lots and rendering, in some cases, half the crop unfit for use; brairds were quite satisfactory and growth average where disease on the crown of the bulbs did not do injury. *Insects*—Some eel-worm on potatoes and canker or 'fly' on turnips. *Weeds*—Not more than the usual annual weeds. *Pastures*—On the whole, pastures were good and quite up to the average of former years. *Live Stock*—Made good progress. Cattle and sheep free from disease. *Clip of Wool*—Up to the average of former years.

**BUTE.** *Wheat*—None grown. *Barley*—None grown. *Oats*—A good crop; a little shorter in some places; threshed fairly well. *Harvest*—Commenced about the usual time; a long harvest; the weather was very broken during cutting, and some loss by sprouting; a fortnight of good weather at the end saved the situation. *Hay*—Was again a short crop, the weather being too cold and dry in the fore part of the year; good quality; yield would not be more than 1½ tons per acre. *Meadow Hay*—Not much grown; a fair crop, but damaged a great deal by wet weather. *Potatoes*—Early crop Epicures were good; 7 tons per acre; late potatoes, principally Kerr's Pink, would be about the same as last year; no new varieties. *Turnips*—Crop brairded well, and there was no resowing; crop, however, turned out poor compared with last year, as there was a rot among them in many places which took away half of the crop. *Insects*—No damage from insects. *Weeds*—No injury from weeds, although green crop was not so easily kept clean as last year. *Pastures*—Were good, especially towards the end of the year. *Live Stock*—Throve well. Cattle and sheep free from disease. *Clip of Wool*—Average, of good quality.

**ARRAN.** *Wheat*—None grown. *Barley*—None grown. *Oats*—About 25 bushels per acre; seed sown, 5 bushels per acre. *Harvest*—Would be two weeks earlier than previous year; in the earlier and low-lying districts harvest began about the second week of August, after which the weather broke down and much of the best crops was destroyed; very few good samples of oats in consequence. *Hay*—Like the corn harvest, the early districts suffered much from

bad weather ; about 2 tons per acre. *Meadow Hay*—Was good, and better weather enabled farmers to secure crop in good condition. *Potatoes*—A good crop and secured in good condition and very free from disease ; Arran Pilot was in good demand, and the new variety Arran Peak gave good promise. *Turnips*—Crop was poor and hardly a sound crop on the island, due to a blackness in the heart of the tuber which is increasing every year. *Insects*—Not much troubled with insects, but wood-pigeons very destructive on the braird. *Weeds*—No injury to any extent except during the wet periods when they seemed to get ahead of the crop. *Pastures*—Quite good. *Live Stock*—Throve well. Cattle and sheep free from disease of any kind. *Clip of Wool*—Much as usual, and prices much improved.

**LANARKSHIRE (Upper Ward).** *Wheat*—Only small quantities grown. *Barley*—None grown. *Oats*—55 to 65 bushels per acre. *Harvest*—Commenced first week in September, but owing to wet weather cutting was delayed and crop was not well secured. *Hay*—30 to 40 cwt. per acre ; a lighter crop than last year owing to dry weather in end of May ; badly wasted after it was cut. *Meadow Hay*—An average crop ; not well secured. *Potatoes*—5 to 8 tons per acre ; much the same as last year ; more disease than usual ; no new varieties planted. *Turnips*—20 to 30 tons per acre ; a good crop ; brairded well and no resowing. *Insects*—No damage. *Weeds*—More than usual ; not easily kept in hand owing to wet weather. *Pastures*—Were bare in spring, but were good in back-end of year. *Live Stock*—Throve fairly well. Cattle and sheep free from disease. *Clip of Wool*—Average.

**LANARKSHIRE (Middle and Lower Wards).** *Wheat*—38 to 40 bushels per acre ; straw, 30 cwt. per acre ; quality of grain and straw much inferior to last season ; seed, mostly English, 3 bushels per acre ; Scots seed, 4 bushels per acre. *Barley*—None grown. *Oats*—50 to 55 bushels per acre ; straw, 25 to 30 cwt. per acre ; quality of grain and straw inferior to last year ; seed, 6 to 6½ bushels per acre for thick-skinned varieties, and 5 to 5½ bushels per acre for others. *Harvest*—Commenced in the third week of August, about one week later than last year. *Hay*—First cut ryegrass, 35 to 60 cwt. per acre ; quality generally good ; small loss suffered from weather conditions ; weight of crop similar to last year. *Meadow Hay*—40 to 50 cwt. per acre ; heavy crop and quality generally good. *Potatoes*—8 to 9 tons per acre ; weight of crop similar to last year ; disease appeared in places previous to lifting and spread in the pits. *Turnips*—A good crop all over ; from 20 to 25 tons per acre ; crop brairded well and there was no resowing. *Insects*—The only crops affected by insect pests were carrots, onions, and cabbages ; these crops suffered to some extent from the carrot-fly and onion-fly and the cabbage maggot. *Weeds*—Ordinary farm crops were generally free from weeds, but it was the worst season on record for annual weeds amongst market-garden crops. The damage done to these crops was material, and heavy expense incurred. *Pastures*—Were good throughout the whole season, and at least equal to 1935. *Live Stock*—Dairy cattle did exceptionally well on the grass until October, when there was a complete falling off in production ; feeding cattle and sheep also did well on the pasture.

Cattle and sheep were free from disease, but again the season was an exceptionally bad one for maggots. *Clip of Wool*—Up to the average.

**RENFREWSHIRE.** *Wheat*—A poor yield of both grain and straw, about three-quarters of average crop, due to severe winter which told especially on lighter soils; grain about 20 cwt.; straw about 25 cwt. per acre; quality variable, with fair proportion of damaged grain owing to bad harvest weather; seed sown, 3 to 4 bushels per acre. *Barley*—None grown. *Oats*—Average crop; grain, 20 cwt. per acre; quality variable due to bad weather at harvest; straw, 20 to 25 cwt. per acre; seed sown, 5 to 6 bushels per acre. *Harvest*—About a week to ten days later than last year, viz., about the third week in August, and finished about the end of September; weather very unfavourable, with good drying days a rarity; much damage done to both grain and straw; uncut wheat was reported to be sprouting on many farms. *Hay*—Fair to light; commenced first week in July, and mostly ricked by the end of the month; mostly secured in good order in earlier districts, but damaged greatly in later districts; ryegrass, 25 to 35 cwt. per acre; timothy about 55 cwt. per acre, but not much now grown. *Meadow Hay*—Very little grown, but everywhere damaged by bad weather. *Potatoes*—About one ton per acre less than last year, and blight fairly prevalent even where sprayed; second earlies suffered most from this disease, some farms reporting a wastage of 3 tons per acre; weather at pitting-time good; second earlies, 9 to 12 tons per acre; main crops, 8 to 10 tons per acre; Golden Wonders, 5 to 7 tons per acre; the new variety, Redskin, favourably reported on both for cropping and quality. *Turnips*—Average crops, but a good deal of rot reported, due to the excessive rainfall; 20 to 30 tons per acre. *Insects*—Not much damage from insects reported. *Weeds*—Annual weeds very prevalent and labour scarce to counteract them. *Pastures*—Very bare and poor until May, when growth commenced; many fields, where heavily stocked, never fully recovered from the check received in the spring. *Live Stock*—Throve only moderately well, due to cold winds and scarcity of grass; lambs suffered especially, and many found their way to the markets in an unfinished condition. Cattle and sheep free from disease; maggot pest not quite so bad as the previous two years. *Clip of Wool*—Average clip, and price good.

**ARGYLLSHIRE (Lochgilthead).** *Wheat*—Practically none grown. *Barley*—None grown. *Oats*—A good crop, but a bad harvest; most of the crop got badly weathered after it was cut, and there would be few good samples of grain in this district; 25 to 30 bushels per acre; straw about 1 ton per acre; seed, 5 to 6 bushels per acre. *Harvest*—About the usual time. *Hay*—Rather a light crop, but of good quality and generally well got; about 25 cwt. per acre. *Meadow Hay*—About the same as last year, but much of it was never got owing to continuous wet weather. *Potatoes*—About the same as last year, 7 to 8 tons per acre; no disease. *Turnips*—Quite a good crop; about 25 tons per acre; braided rather slowly in some cases, but not much resowing. *Insects*—No damage to any extent. *Weeds*—Could be well kept down in the early summer.

*Pastures*—Average growth and quality. *Live Stock*—Throve very well. Cattle and sheep free from disease. *Clip of Wool*—Average.

ARGYLLSHIRE (Kintyre). *Wheat*—Only some half-dozen acres grown in district; grain discoloured by bad harvesting conditions; seed, fully  $3\frac{1}{2}$  bushels per acre. *Barley*—Not much barley or bere grown now in district; yields about average, but grain weathered badly in the stook; seed sown, about 4 bushels per acre broadcast. *Oats*—Much inferior in quality to preceding year; decrease in yield of grain varied from 10 per cent to 20 per cent; colour of grain poor; from 15 to 20 cwt. per acre; straw average in bulk but largely injured by locking and badly discoloured by prolonged wet weather conditions prior to and during harvest operations; seed, generally 5 bushels per acre. *Harvest*—Began within a week of usual time, but not completed for two to four weeks after normal time. *Hay*—About 35 to 40 cwt. per acre; quality not so good as last year; even when apparently well got the hay weathered rather badly in the rick; stacking operations later than usual. *Meadow Hay*—Quite good for bulk, but quality suffered by reason of excessive rain; considerable deterioration in the sward after cutting. *Potatoes*—About one ton per acre under last year's crop; averaged about 7 tons per acre over all, but the best crops scaled up to 9 tons per acre; no new varieties tried; most popular varieties in district—Epicures for early, and Kerr's Pink for main crop; crop harvested in excellent condition; some blight apparent in August, but no material harm done to tubers. *Turnips*—A very irregular crop and inferior to crop of 1935; many crops suffered badly from finger-and-toe and dry-rot; raan disease not nearly so prominent as last year; a good many farmers using boron treatment as a preventive measure; average yields about 4 tons under last year's crops and badly diseased crops not much better than half a crop. *Insects*—Some turnip-fly attack, but not so severe as last year; root-maggot reported troublesome in some cases; diamond-back moth larvæ attack found on two crops, but much damage prevented by timely onset of wet boisterous weather. *Weeds*—About average, redshank and spurrey the most noticeable weeds. *Pastures*—Late in starting, but afterwards were abundant; grass very flush in late autumn, but suffered from heavy rains and strong winds from October onwards. *Live Stock*—Did well throughout summer and early autumn; about 15 fatal cases of hover on wild white clover pastures in June and July; fat cattle difficult to maintain in condition in late autumn. Cattle and sheep generally free from disease; some reports of trouble with husk among calves; one loss reported of 14 calves out of a stock of 16; cause of trouble not known, and husk probably a secondary infection; 'twin' disease suspected in one or two lowland sheep flocks; sheep-maggot trouble not so severe this year as last two or three years. *Clip of Wool*—The quality of the wool clip was good, but weight under the average.

ARGYLLSHIRE (Islands of Islay, Jura, and Colonsay). *Wheat*—None grown. *Barley*—None grown. *Oats*—Very good crop, averaging 44 bushels per acre and 41 lb. per bushel; straw was shorter than usual; seed sown, 5 bushels per acre. *Harvest*—Began on 24th August, about ten days later than usual; carried through with



difficulty by reason of extremely wet weather in September; in certain cases heating of ricks was experienced; late harvests were much more successful owing to good harvest weather during last days of September and early days of October. *Hay*—Lighter than last year, owing to drought in early summer, but with an improvement just before cutting the yield improved to about 1 ton per acre. *Meadow Hay*—Slightly less productive than last year. *Potatoes*—An improvement on last year; about 8 tons per acre; there was no disease, and the lifting was carried through in ideal weather; no new varieties were planted. *Turnips*—Similar to last year, although not quite so good; 15 tons per acre; the crop braided well, and only one sowing was required. *Insects*—Crops suffered no injury from insects. *Weeds*—No damage from weeds. *Pastures*—Lack of rain in early summer retarded growth, but following wet weather in July there was a rapid improvement and pastures soon regained their usual vigour. *Live Stock*—The lack of pasture in early summer gave stock a setback, but with the improvement in July stock thereafter thrived well. Cattle and sheep remained free from disease, and again maggot trouble was less prevalent. *Clip of Wool*—Average.

#### STIRLING DISTRICT.

DUMBARTONSHIRE (Upper). *Wheat*—None grown. *Barley*—None grown. *Oats*—Fairly good crop, but the quality of both grain and straw was spoiled by wet weather. *Harvest*—Began about the same time as last year—nearly a fortnight before the usual time. *Hay*—Ryegrass hay was a fair crop but suffered a little from rain. *Meadow Hay*—Was a heavier crop than last year, but suffered from wet weather; some was only fit for bedding. *Potatoes*—Rather a lighter crop than last year; about 6 tons per acre; free from disease; no new varieties planted. *Turnips*—Just a middling crop; braided very slowly, but only one sowing required. *Insects*—No damage by insects. *Weeds*—A good deal of skellack in oats. *Pastures*—Grass was a little late in coming, but was good all summer and lasted long. *Live Stock*—Thrived well. Cattle and sheep were healthy, but maggots were very bad on sheep, especially in September. *Clip of Wool*—A good average clip.

DUMBARTONSHIRE (Lower). *Wheat*—About 40 bushels per acre; quality generally was poor; quantity and quality of straw was also under average; about 25 cwt. per acre; seed, 3 to 4 bushels per acre. *Barley*—None grown. *Oats*—An average crop when cut, but unfavourable harvesting weather reduced the quality of grain and the weight of straw when threshed; grain, about 45 bushels per acre; straw, about 22 cwt. per acre; seed, 5½ bushels per acre. *Harvest*—Started about a week earlier than usual. *Hay*—Lighter than last year, and quality not so good; clover was not so abundant; 32 cwt. per acre. *Meadow Hay*—Deficient both in quantity and quality as compared with last year. *Potatoes*—First earlies were a heavier crop than last year, about 9 tons per acre; main crop varieties were not so bulky and would run about 7 tons dressed; blight made its appearance by the middle of August and badly affected the filling out of the crop; no new varieties planted.

*Turnips*—Crop was bulkier than last year and the quality good; average yield, 18 tons per acre; braided well and no resowing required. *Insects*—Very little damage by insect pests; the turnip-fly beetle was present but did no serious damage. *Weeds*—Crops were remarkably free from weeds; only on late-sown turnips did spurrey cause any trouble. *Pastures*—Were bare in the beginning of the grazing season, but from July onwards they were very luxuriant and lasted well into the autumn. *Live Stock*—Did very well, especially during the later grazing months, September and October. Dairy cattle suffered from mastitis during the autumn; sheep were free from disease, but suffered from maggot-fly during September. *Clip of Wool*—The quality of wool was good, but the clip was under average weight.

**STIRLINGSHIRE (West).** *Wheat*—A good crop, about 15 cwt. per acre; seed, 4 bushels per acre. *Barley*—None grown. *Oats*—Well got oats threshed well—about 15 cwt. per acre, but much of the crop was badly weathered and threshed lighter; more straw than last year. *Harvest*—Began about ten days earlier than usual. *Hay*—Fully better crop than last year, at least 30 cwt. per acre, but not so well got. *Meadow Hay*—Light crop; much of it very badly got and very poor quality. *Potatoes*—A light crop, about 6 tons per acre; small size; some disease; no new varieties. *Turnips*—An average crop—about 18 tons per acre; early sown crop a poorish braird and some resowing; some finger-and-toe. *Insects*—Rather less than usual; some 'fly' on turnips. *Weeds*—Redshank more prevalent than usual. *Pastures*—Were very good. *Live Stock*—Throve very well. Cattle and sheep free from disease. *Clip of Wool*—Average.

**STIRLINGSHIRE (East).** *Wheat*—About 38 bushels per acre; fair quality; straw, about 20 cwt. per acre. *Barley*—28 bushels per acre; average crop; straw, about 18 cwt. per acre. *Oats*—Shorter crop; about 45 bushels per acre; straw, about 16 cwt. per acre. *Harvest*—Began about usual time. *Hay*—Rather under average crop; fairly secured; ryegrass about 25 cwt. per acre; timothy about 40 cwt. per acre. *Meadow Hay*—Average crop and well secured. *Potatoes*—Above average crop; usual varieties planted. *Turnips*—A very good crop—especially swedes where free from finger-and-toe. *Insects*—About usual. *Weeds*—Usual. *Pastures*—Quite a fair season. *Live Stock*—Throve quite well. Cattle and sheep free from disease. *Clip of Wool*—Average clip.

**CLACKMANNANSHIRE.** *Wheat*—The braird was thin and sickly, having been sown on a wet seed bed, and with frost later was a very poor crop; 20 to 30 bushels per acre; straw, 15 to 20 cwt. per acre; seed sown, 4 to 5 bushels per acre. *Barley*—None grown. *Oats*—A short crop, deficient in straw; not too well filled in the ear; were harvested in fair condition; 25 to 30 bushels per acre, average weight 38 to 40 lb. per bushel. *Harvest*—Began about the usual time. *Hay*—A poor crop; 25 to 30 cwt. per acre; early made hay was well got; the remainder got bad weather and the quality was deficient. *Meadow Hay*—Very little made in the district. *Potatoes*—Kerr's Pink, 6 to 7 tons per acre; Golden Wonder, 5 to 6 tons per acre; some disease in Kerr's Pink; no disease in

Golden Wonder. *Turnips*—A good yield, 20 to 30 tons per acre; braided well, only one sowing required; finger-and-toe in some cases and dry-rot in others. *Insects*—Very little damage by the turnip-fly. *Weeds*—Little damage by weeds. *Pastures*—Were of average growth, but dairy cows required additional feeding to keep up the supply of milk. *Live Stock*—Were healthy. Cattle and sheep were free from disease. *Clip of Wool*—A fair average.

PERTSHIRE (Western). *Wheat*—Crop under average; less sown owing to wet autumn; 36 to 40 bushels per acre; secured in fair condition; straw brittle and poor for thatch; seed,  $3\frac{1}{2}$  to 4 bushels per acre. *Barley*—Very little grown. *Oats*—Crop much under normal owing to dry spring; range of yield wide, 30 to 40 bushels; straw light; first quarter of crop secured in good condition—much of remainder badly sprouted; seed, 5 to 6 bushels per acre. *Harvest*—Commenced middle of August in good weather; September, however, brought wet, mild, quiet weather which caused much damage by sprouting in a few days. *Hay*—Timothy—under average, 60 to 65 cwt. per acre (green cut); ryegrass—very light on dry field; carse average; all secured in good condition. *Meadow Hay*—Light crop; not so much cut as usual. *Potatoes*—Good crop; 6 to 10 tons per acre; many crops suffered from blight, starting with mild weather at beginning of September; no new varieties; all lifted in ideal condition. *Turnips*—A good crop of excellent quality; 20 to 25 tons per acre; braided well and no second sowings required. *Insects*—Crops on the whole were free from insect pests. *Weeds*—Crops free from weeds. *Pastures*—Good quality, but short in quantity owing to dry spring; no 'topping' required. *Live Stock*—Throve well. Cattle and sheep free from disease, but maggot-fly troublesome; double dipping required in many cases owing to sheep having been purchased from infected areas. *Clip of Wool*—Average clip of good quality.

#### PERTH DISTRICT.

FIFESHIRE (Middle and Eastern). *Wheat*—Much below average crop; the poorest yield of wheat for many years owing to very wet weather at sowing time in November and wet and frost through winter; more wheat than usual was sown in spring; all over this district wheat would not thresh more than two-thirds of last year, say 28 bushels per acre; straw short and thin on the ground; seed sown, 3 to 4 bushels per acre. *Barley*—Quite a good crop for quantity but the quality was spoilt by bad weather at harvest; 36 to 40 bushels per acre; seed sown,  $3\frac{1}{2}$  bushels per acre. *Oats*—Under average crop; about 40 bushels per acre; straw short; seed sown, 4 to 6 bushels per acre. *Harvest*—Began at usual time—second week in August; weather was very wet and broken and great difficulty was experienced in getting crops harvested owing to very heavy rains which spoilt the grain considerably; one of the wettest harvests for many years; weather dried up towards end of harvest, which helped later districts. *Hay*—The lightest crop for many years; on many farms about half the usual weight; 1 to  $1\frac{1}{2}$  tons per acre; fair quality. *Meadow Hay*—None grown. *Potatoes*—A good crop and good quality; one of the best crops for several years; weather

at lifting time was very good and quite different from the very wet weather at lifting time in 1935; about 6 tons per acre of ware; very little disease. *Turnips*—Swedes a good crop; some canker and dry-rot amongst them; 20 to 25 tons per acre; yellow turnips fairly good; not many grown; no resowing. *Insects*—Not more than usual. *Weeds*—Not more than usual, but poppy and charlock very plentiful amongst late-sown wheat. *Pastures*—Were good and of good quality. *Live Stock*—Throve very well. Cattle and sheep free from disease. *Clip of Wool*—About average. *Sugar Beet*—The area under sugar beet in the county of Fife in 1936 was approximately 4000 acres. The season was generally suitable for the crop, and much better results were obtained than in 1935. A large proportion of the crop was lifted under very favourable weather conditions, whereby the amount of tare on deliveries to the factory was considerably lower than in 1935. Many excellent crops were lifted, individual crops of 16 tons per acre being reported in some cases, with a general average of between  $8\frac{1}{2}$  and 9 tons per acre. The sugar percentage was also much higher than in 1935, an average of over 17 per cent being recorded.

**FIFESHIRE (Western).** *Wheat*—Below the average of the past few years; the wet winter and frosts killed many of the young plants and the resulting crop was thin on the ground; 28 to 34 bushels per acre; straw likewise of light weight; seed sown, 3 to 4 bushels per acre. *Barley*—Of very variable quality; 28 to 32 bushels per acre grown on the better lands; on dry lands the yield was light and so was the weight of straw; seed sown, 3 to 4 bushels per acre. *Oats*—With the dry spring and summer months the oat crop suffered severely; the lowest yield for several years, averaging 40 to 46 bushels per acre; straw very scarce for winter fodder; the crop ripened unevenly owing to second growth; seed sown, 5 to 6 bushels per acre. *Harvest*—Commenced on 17th August and was general by 25th, which would be seven to ten days later than the past earlier years; the weather broke on 1st September and difficulty was experienced in securing the bulk of the crop; much discoloration and wastage. *Hay*—The hard dry spring caused the hay crop to be stunted and a light crop on all lands; the average would not exceed 30 cwt. per acre, and second cutting was required to make up the shortage. *Meadow Hay*—Like ryegrass was light; quality good. *Potatoes*—A good yield, averaging up to 8 tons per acre, and free from disease; no new varieties planted. *Turnips*—Were slow to braird due to the prolonged dry time at sowing; only little if any second sowing; yield below the average of past years. *Insects*—Crops in general have been free from insect pests. *Weeds*—Crops free from weeds. *Pastures*—Were very bare during spring and early summer and hand feeding had to be carried on most of the season; the autumn rains brought an abundance of grass. *Live Stock*—Despite the shortage of grass, stock generally thrived well on the pastures; the rush of autumn grass caused much scouring amongst younger cattle. Cattle and sheep have been free from disease. *Clip of Wool*—An average clip.

**PERTSHIRE (Eastern).** *Wheat*—Showed a reduction of acreage owing to the prolonged frost during November and December, and

was a poor crop, being thin on the ground; threshed poorly; 30 to 40 bushels per acre; seed, 4 to 5 bushels per acre. *Barley*—An average crop; acreage about the same as last year; early samples were good, others only fair owing to broken weather during harvest; 40 to 42 bushels per acre; seed, 3 to 4 bushels per acre. *Oats*—A very variable crop; on light land it was poor owing to drought in May and early June, but on good land it was an average crop, and threshed well; on light land 30 to 40 bushels per acre; on good land 50 to 60 bushels per acre; seed, 4 to 6 bushels per acre; straw scarce. *Harvest*—Began on 10th August, which was early, but was very prolonged owing to rain which started about 1st September and continued for a fortnight. *Hay*—Crop was the lightest for years—just about one-half of last year's crop—and of moderate quality; 15 to 30 cwt. per acre. *Meadow Hay*—Was less than last year, and suffered from the effects of wet weather. *Potatoes*—7 to 10 tons per acre; about the same as last year; a good deal of disease in second earlies, which started about September; no new varieties. *Turnips*—Swedes a good average crop, 30 to 35 tons per acre; braided fairly well; only a few were resown. *Insects*—No damage by insects. *Weeds*—No damage by weeds. *Pastures*—Late in coming owing to cold spring; otherwise average. *Live Stock*—Throve quite well. Cattle and sheep free from disease. *Clip of Wool*—Average clip.

**PERTSHIRE (Central).** *Wheat*—Acreage sown about the same as last year; some fields thinned out badly; 32 bushels per acre; straw, 23 cwt.; fairly well got. *Barley*—Hardly any grown. *Oats*—About the same acreage as last year; yield less—40 bushels per acre; straw shorter—18 cwt. per acre; early crops got in in fine condition, but later cut were badly damaged by sprouting and heating in stack. *Harvest*—A fairly early harvest, although a week later than last year; mostly cut in fine order, but nearly three weeks of rain and close warm weather afterwards did much damage. *Hay*—Much lighter crop—about 1 ton per acre; early cut was well got, but a good deal spoilt on late farms. *Meadow Hay*—An average crop and mostly well got. *Potatoes*—Much better yield than last year; average 8 tons per acre; some earlies had a good deal of disease, but main crop no disease; lifted in fine condition. *Turnips*—An extra good crop; yellows, 18 to 22 tons per acre; swedes, 22 to 27 tons per acre; crop braided well; no second sowing. *Insects*—No damage by insects. *Weeds*—Crops free from weeds. *Pastures*—Looked well early on, but with very dry weather were short, especially on light land. *Live Stock*—Did well, even with the shortage of grass. Cattle and sheep were free from disease. *Clip of Wool*—An average clip of wool.

**PERTSHIRE (Highland).** *Wheat*—Not generally sown; only a few acres grown on suitable farms; yields not definitely ascertained. *Barley*—Only small patches grown for stock; weight light. *Oats*—Crop slightly under average with straw of fair quality; natural weight about 42 lb. per bushel; 6 bushels per acre sown on an average. *Harvest*—Began at the usual time and in most cases was completed by the end of September except on very late high land; in a few areas the crop was badly harvested owing to weather con-

ditions, and, where previously laid, grain and straw were inferior in quality. *Hay*—Crop much under average, although well secured; 25 cwt. per acre; aftermath of clover very light. *Meadow Hay*—Also under average as to quantity; of good quality where secured early. *Potatoes*—A very good crop; about 8 tons per acre; secured under ideal weather conditions; not much disease apparent; no new varieties planted to any extent. *Turnips*—A good crop; braided well, and no second sowings; about 17 tons per acre. *Insects*—No damage. *Weeds*—Very few weeds, and where apparent easily dealt with. *Pastures*—Of average growth and quality. *Live Stock*—Throve well. Cattle and sheep free from disease. *Clip of Wool*—A good quality clip, slightly under average; weather conditions fine during clipping season.

ANGUS (Western). *Wheat*—Yield, 28 bushels per acre; straw short, and quality of grain only fair, owing to wet weather during harvest; seed, 3 to 4 bushels per acre drilled. *Barley*—38 bushels per acre; grain and straw of good quality where got before break in weather; 3 to 4 bushels per acre drilled. *Oats*—52 bushels per acre; grain and straw of good quality, but a lot spoilt by bad weather during harvest; seed, 4 to 7 bushels per acre according to variety and district. *Harvest*—Began fairly early, but weather broke when about half the crop was secured; this caused considerable damage. *Hay*—The lightest crop for years; about 28 cwt. per acre; quality fairly good, both ryegrass and clover. *Meadow Hay*—Very little grown. *Potatoes*—7 tons per acre; much more disease than last year, especially in King Edwards; disease commenced about the beginning of September, and was worse in some places than others, even after four sprayings. *Turnips*—19 tons per acre and of good quality; crop braided well, and no resowing; a good deal of rot later on. *Insects*—Very little damage done, at least not more than usual. *Weeds*—Damage would be less than usual. *Pastures*—About the same as last year, both as regards quality and growth. *Live Stock*—Throve well. Cattle and sheep were free from disease. *Clip of Wool*—Hardly up to average, but quality good.

#### ABERDEEN DISTRICT.

ANGUS (Eastern). *Wheat*—Owing to a wet autumn and winter, less wheat was sown and the crops were only fair; an average of 12 bushels per acre less than last year and grain not so good; in many cases badly harvested on account of wet weather during harvest; straw deficient and brittle; seed, 3 to 4 bushels per acre. *Barley*—A short crop and not too well breasted; quite 6 bushels less than last year; half the crop was well got—the other half a good deal spoiled by rain; straw rather under average; seed, about 3½ bushels per acre. *Oats*—Crop very varied; poor on poor land and nearly an average on good land; 16 to 18 bushels less than last year; straw only fair for quantity and quality. *Harvest*—Began early—in first week of August—but a fortnight's wet weather during second half of August delayed the finish and spoiled crops badly. *Hay*—Crop about half of last year's weight; about 20 to 30 cwt. per acre; 40 cwt. was quite exceptional; in some places a very good second crop was secured in good order; the quality all

over was generally good, but much behind last year. *Meadow Hay*—Very little made, and the crop was generally poor and light. *Potatoes*—A very satisfactory crop; quite 2 tons an acre more than last year; 10 to 12 ton crops quite common. In some varieties, such as King Edward, Majestic, and Eclipse, disease began in wet weather in August, and where they were not sprayed was rather bad. Doon Star was again the most satisfactory variety and most free from blight. *Turnips*—Swedes generally braided well and grew well all the year; a very fine crop—30 to 35 tons per acre being quite common; as winter advanced a good deal of dry-rot was evident, but still the sound turnips made more than an average crop. *Insects*—No insect pests. *Weeds*—Were easily kept down owing to dry weather and speedy growth of the crops. *Pastures*—As a rule, if not overstocked, did very well; grass was plentiful and of good feeding quality, with a great rush of growth in September and October. *Live Stock*—Throve exceptionally well. Cattle and sheep free from disease. *Clip of Wool*—Good quality and rather over the average for weight.

KINCARDINESHIRE. *Wheat*—28 to 38 bushels per acre; quality of grain good where secured unspoilt by rain; straw rather short and of poorer quality than usual;  $3\frac{1}{2}$  to 4 bushels per acre sown. *Barley*—36 to 40 bushels per acre; quality of grain good where harvested before weather conditions broke down; straw short, soft, and not of good quality. *Oats*—56 to 72 bushels per acre on stiffer soils; poor land, 40 to 48 bushels per acre; lea oats generally good; clean land oats varied, and on light sandy soil were inclined to burn; straw short; seed, 6 to 8 bushels per acre according to variety. *Harvest*—Began about the usual time, and for the first two to three weeks the weather conditions were quite good; then the break came and discoloured most of the grain; harvest in the two preceding years was abnormally early. *Hay*—Crop was in general very poor, being short, thin, and deficient in clover; much of it was spoiled by bad weather; 1 to  $1\frac{1}{2}$  tons per acre; considerably below average. *Meadow Hay*—None grown. *Potatoes*—7 to 8 tons per acre; less than last year; disease present in some varieties, and a good deal of waste when dressing; Doon Star and Arran Pilot promised well. *Turnips*—16 to 32 tons per acre near coast; an average crop; inland not so good; braided well and very little resowing done—only where braird unequal. *Insects*—Turnips were badly damaged around roots by some kind of weevil; damage also by crows to turnip crop. *Weeds*—On account of dry summer, weeds were easily kept in check. *Pastures*—Suffered badly from drought in May and June, and were bare until heavy rains in July. *Live Stock*—Did not thrive so well as usual. Cattle and sheep free from disease. *Clip of Wool*—Average clip of good quality.

ABERDEENSHIRE (Buchan). *Wheat*—Practically none grown. *Barley*—Good crop; 40 bushels per acre. *Oats*—42 bushels per acre; short straw as a rule. *Harvest*—Started about 20th August; oats secured in August were in splendid order; after that a very protracted harvest and much of the crop secured in bad order. *Hay*—Crop much lighter than usual; 30 to 50 cwt. per acre. *Meadow Hay*—None grown. *Potatoes*—A good crop; a good deal of disease; some varieties worse than others; from 6 to 7 tons per acre.

*Turnips*—Swedes from 15 to 20 tons per acre; yellows from 12 to 15 tons per acre; quality not so good as usual; a good deal of resowing. *Insects*—Turnips were badly damaged by insects; damage was greater than usual. *Weeds*—No damage. *Pastures*—Average growth and quality. *Live Stock*—Throve very well. Cattle and sheep free from disease. *Clip of Wool*—Average clip.

ABERDEENSHIRE (Central). *Wheat*—38 to 40 bushels per acre; quality of grain and straw not quite so good as last year; seed sown, 3 to 3½ bushels per acre, mostly sown with drill machine. *Barley*—38 to 40 bushels per acre; rather less than last year; general average of bushel weight, 54 lb.—about 2 lb. less than last year; seed sown, 3 to 3½ bushels per acre where sown by drill machine, and 4 bushels per acre where sown by broadcast machine or by hand. *Oats*—42 to 46 bushels per acre; about 8 bushels less than last year; natural bushel weight about 42 lb.—2 lb. less than last year; straw about 20 cwt. per acre; less than last year; seed sown, Potato and all thin-husked varieties, 4½ to 5 bushels per acre where sown by drill machine, 1 to 1½ bushels per acre more where sown by broadcast machine or hand; all thick-husked varieties 1 to 2 bushels extra per acre. *Harvest*—Commenced about the first week of September and generally completed by first week of October. *Hay*—17 to 20 cwt. per acre; about half of last year's crop; not so well mixed with clover as last year, and of poor quality. *Meadow Hay*—Not so good as last year. *Potatoes*—7 to 8 tons per acre; about 1 ton more than last year; quality good; disease reported only to a very small extent; no new varieties reported. *Turnips*—14 to 16 tons per acre; 4 to 5 tons more than last year; crop braided well, but in many cases second sowing was required, as frost and fly affected the young braird; crop reported not to be keeping well. *Insects*—Crops injured to some extent by frost and turnip-fly; damage not generally great. *Weeds*—No injury where land well tilled and cultivated. *Pastures*—During the first half of season were poor—too dry; latter half of season pastures were very good. *Live Stock*—Throve well. Cattle and sheep free from disease. *Clip of Wool*—Very similar to last year.

ABERDEENSHIRE (Strathbogie). *Wheat*—None grown. *Barley*—Quantity grown rather below average; yield, 30 to 44 bushels per acre, weighing 52 to 55 lb. per bushel; seed sown, 4 bushels per acre. *Oats*—In some parts crops better than last year and in others not so good; fairly well harvested and yield average—40 to 48 bushels per acre, and weight 40 to 42 lb. per bushel; quality in some districts affected by wet weather. *Harvest*—Began early; August was more a growing month than a ripening month, and as September was a wet month harvest in consequence was prolonged. *Hay*—Grown mostly for home consumpt. *Meadow Hay*—None grown. *Potatoes*—Were of good quality, and quantity above average; no new varieties grown; staple crops—Kerr's Pink and Golden Wonder, and Duke of York for early varieties; favourably gathered. *Turnips*—Although early frosts and very dry weather in June, there was no resowing required; crop very satisfactory to start, but affected by worm at roots. *Insects*—No trouble with grub or insects except in turnips. *Weeds*—No trouble with weeds; weather favourable for cleaning the land. *Pastures*—Saved



by rain in July; prior to that, dry weather affected the grass, but on the whole abundant and lasted well into the autumn. *Live Stock*—Did well on pastures. Cattle and sheep free from disease. *Clip of Wool*—Good quality, and quantity above average in some parts; Blackface wool rose 100 per cent in price, but bulk of the clip sold prior to the rise. *General Remarks*—1936 was a year of variable weather. Frost and snow in February when cultivation fell into arrear, but as April was a dry month it proved good for cultivation. With a dry April, in May and June pastures began to suffer; but July put matters right, and crop, pastures and turnip crop benefitted. Harvesting started early, but the weather broke and harvest in many districts was protracted. Turnips went wrong in many parts by attack of insects and canker or rot.

**BANFFSHIRE (Lower).** *Wheat*—Slightly increased acreage grown; about 40 bushels per acre; seed sown, about  $4\frac{1}{2}$  bushels per acre; straw, about 30 cwt. per acre and of good quality. *Barley*—Crop below average owing to dry season; 36 to 40 bushels per acre; natural weight per bushel, 53 to 54 lb.; straw, about 20 cwt. per acre; seed sown, 4 bushels per acre. *Oats*—48 to 56 bushels per acre; natural weight per bushel, 40 to 42 lb.; straw shorter than last year, but of good quality; seed sown, 6 bushels per acre. *Harvest*—Began slightly earlier than usual. *Hay*—Crop less than last year; average about 30 cwt. per acre. *Meadow Hay*—None grown. *Potatoes*—Similar to last year; 7 to 8 tons per acre; no disease; no new varieties planted. *Turnips*—Fully an average crop; 18 to 20 tons per acre; some second sowing was done; brairding irregular. *Insects*—Only injury was done to turnip crop during November by some kind of worm. *Weeds*—No injury by weeds. *Pastures*—During early grazing period pastures were much below average, but after July there was abundance of grass, and with fine weather towards end of the year the grazing season lasted longer than usual. *Live Stock*—Did very well. Cattle and sheep free from disease; maggot-fly was more troublesome than usual. *Clip of Wool*—Was up to average.

**BANFFSHIRE (Upper).** *Wheat*—None grown. *Barley*—Very little grown, as more ground is now pastured by sheep, and distillers get foreign barley cheaper than the home-produced. *Oats*—Also a restricted area grown, as more ground set aside as pasture for sheep. *Harvest*—Began about fourth week of August, but there followed a period of dull weather and fog, with few drying winds, and much of the crop was discoloured in stook and was stacked in poor condition. *Hay*—Rather poor quality, being like oats, not well secured. *Meadow Hay*—Very little grown, as the ground was pastured when the sown grasses failed in August. *Potatoes*—Of good quality, but hardly up to last year in quantity; only grown for home consumption. *Turnips*—Came well to the hoe, but results variable, as vermin preyed on the crop later on in the season. *Pastures*—Suffered from want of rain in the early part of the season; in September a great growth set in, and all pastures became green and fresh and came into good use. Cattle did well from this later growth of grass. Grass disease, fortunately, was not so prevalent as in former years. *Clip of Wool*—A good average, both in quantity and quality.

## INVERNESS DISTRICT.

**MORAYSHIRE.** *Wheat*—20 cwt. per acre ; straw, 29 cwt. per acre ; quality good ; alternate spells of wet and frost in winter weakened and thinned out the plants and from this they never recovered ; seed sown, 4 bushels per acre broadcast, 3 to 3½ bushels per acre drilled. *Barley*—On good land a good crop, on light land suffered much from drought ; yield below average—17 cwt. per acre ; quality fair ; straw, 17 cwt. per acre ; seed sown, 4 bushels per acre. *Oats*—Lower Moray suffered from drought, and crop much lighter than last year ; the uplands had a good crop ; grain, 16 cwt. per acre ; quality fair ; straw, 18 cwt. per acre ; quality good ; seed varied according to variety sown and whether drilled or broadcast—4½ to 7 bushels per acre. *Harvest*—Began on 5th August—a few days earlier than usual. *Hay*—25 cwt. per acre ; quality poor, practically all being damaged by rain before being secured ; there was a lack of clover, which seemed to be a result of the dry spring following a hard winter ; the aftermath was very abundant. *Meadow Hay*—About average ; not much grown. *Potatoes*—Yield down from last year ; 6 tons per acre ; some complaints of disease in the tubers ; no new varieties grown. *Turnips*—Heavy crop on good land ; very poor on light land ; braided well and little resowing ; from 12 to 30 tons per acre. *Insects*—Numerous complaints of damage to turnips and swedes from some kind of worm eating into roots. *Weeds*—Not more than usual. *Pastures*—Slow of growth in the early summer, but came away well later, with plenty of autumn grass. *Live Stock*—Throve very well. There was little disease except for the grass sickness scourge. *Clip of Wool*—About average, both for quality and weight.

**NAIRNSHIRE.** *Wheat*—Not much grown ; 36 bushels per acre ; 4 bushels sown. *Barley*—32 bushels per acre ; 4 bushels sown ; straw much less than last year. *Oats*—48 bushels per acre ; 6 to 7 bushels sown ; straw very short. *Harvest*—Began about usual time. *Hay*—Under average, say 1½ tons per acre. *Meadow Hay*—None grown. *Potatoes*—About 7 tons per acre ; slight amount of disease in white varieties. *Turnips*—An excellent crop, especially swedes ; say 25 tons per acre. *Insects*—A little damage by worm in turnip. *Weeds*—None. *Pastures*—Very much under average owing to dry season. *Live Stock*—Throve fairly well. Cattle and sheep free from disease. *Clip of Wool*—Average.

**INVERNESS-SHIRE (Inverness).** *Wheat*—Not so good as 1935 ; the return per acre in many cases was small. *Barley*—A good crop, averaging 40 bushels per acre. *Oats*—A good crop, with an average of 52 bushels per acre, except on some light land that was affected by drought in the early summer. *Harvest*—Began about a week earlier than last year ; the weather was very wet for a time and in sheltered places it was very difficult to get the crops secured. *Hay*—Below the average, and on light land it had to be pastured in many cases. *Meadow Hay*—A good crop ; and with the open weather in the back-end it was well secured. *Potatoes*—Yield in many cases short, and disease very bad in some early varieties. *Turnips*—Good crop, but not so heavy as last year. *Insects*—No damage. *Weeds*—No damage. *Pastures*—Of average growth and quality, and kept growing well until end of season. *Live Stock*—Throve very well.

Cattle and sheep free from disease. *Clip of Wool*—Quality good ; average clip ; price increased from last year.

INVERNESS-SHIRE (Skye). *Wheat*—None grown. *Barley*—None grown. *Oats*—Scarcely as good as for former years, either in grain or straw, but still not a bad crop and secured in good condition. *Harvest*—Commenced a little earlier than usual—about 23rd August. *Hay*—A light crop owing to the dry weather during the last part of spring and on to the middle of June ; it was during the period of two or three weeks before cutting that the hay made any bulk ; secured in good condition. *Meadow Hay*—A good crop, much better than last year ; secured in good condition. *Potatoes*—On the whole a good crop ; tubers were abundant and the quality generally was better than for several years, but in Kerr's Pink—the variety most extensively grown—there was a good deal of wart disease. *Turnips*—The area under turnips was small, but the crop was quite good. *Insects*—Little or no damage by insects. *Weeds*—Damage rather less than usual. *Pastures*—Were scarcely so good as in former years ; they were very bare up to the end of July ; after that the growth was fairly good. *Live Stock*—Cattle especially did not thrive well for the first part of the season, but they did well during the latter part. There was a good deal of sickness in cattle owing, it is thought, to the abnormally dry summer, but sheep kept fairly sound. *Clip of Wool*—Quality of wool about average ; quantity somewhat under average ; good prices obtainable at back-end, particularly for Blackface wool.

INVERNESS-SHIRE (Lochaber). *Wheat*—None grown. *Barley*—None grown. *Oats*—An average crop secured in good order owing to very good harvest weather ; seed sown, about 6 bushels per acre. *Harvest*—About a week earlier than the average ; commenced about middle of August. *Hay*—Ryegrass and clover was an average crop, about 2 tons per acre on good land, but on dry light soil the crop was very light. *Meadow Hay*—Was very late of coming, owing to the dry summer, but it came away in July and by August there was a very good crop, which was secured in good condition. *Potatoes*—About an average crop, and very clear of disease ; Kerr's Pink and Golden Wonder were the principle varieties planted. *Turnips*—A good average crop, free from disease ; no second sowing required. *Insects*—Very little injury if any. *Weeds*—Owing to the dry summer the crops got well in front of weeds and the damage from weeds was below the average. *Pastures*—Were very bare during the late spring and early summer, but improved right through the harvest. *Live Stock*—Improved very greatly during August and September. Cattle and sheep were free from disease. *Clip of Wool*—About average for quantity ; very clean and free from filth.

ROSS-SHIRE (Dingwall and Munlochy). *Wheat*—More wheat sown than last year ; yield, 32 to 48 bushels per acre ; quality good ; seed sown, 3 to 4 bushels per acre. *Barley*—Less barley grown than last year ; yield, 36 to 44 bushels per acre ; quality of grain good but large quantity discoloured by bad harvest ; straw did not bulk ; seed sown, 3 to 4 bushels per acre. *Oats*—Yield varied more than usual owing to dry spring ; on poor land the yield in many cases was

under 16 bushels; on good land the average yield was 40 to 80 bushels; early harvested grain good quality; late harvested only fair; straw considerably below average bulk. *Harvest*—Varied greatly; only on very early farms was the crop all secured in good order, as the weather broke and harvest was prolonged. *Hay*—Crop much below average, but quality good; 15 to 35 cwt., the latter only in exceptional cases. *Meadow Hay*—Practically none grown. *Potatoes*—Yield considerably under last year; some varieties very badly affected with disease; 4 to 8 tons per acre. *Turnips*—Crop very good; above average; no resowing; average yield—yellows, 10 to 15 tons per acre; swedes, 12 to 25 tons per acre. *Insects*—No damage by insects. *Weeds*—No injury. *Pastures*—Were very bare all season till the autumn, when they were more abundant than usual. *Live Stock*—All thrive well. Cattle and sheep free from disease. *Clip of Wool*—Average clip; quality good.

ROSS-SHIRE (Tain, Cromarty, and Invergordon). *Wheat*—A lightish crop owing to the dry year; average not more than 36 bushels per acre; 4 bushels per acre sown. *Barley*—A fair crop on good land; 40 to 44 bushels per acre; weight, 54 to 55 lb. per bushel; straw, light crop; quality and colour fair; seed,  $3\frac{1}{2}$  to 4 bushels per acre. *Oats*—On good land a seed crop; on light land thin; 40 to 48 bushels average crop; quality of grain only fair; colour very mixed; straw generally light; seed, 4 to 7 bushels per acre according to variety. *Harvest*—Began generally about the 24th August. *Hay*—A very light crop; 2 tons on very good land,  $1\frac{1}{2}$  tons on middling land; quality very mixed. *Meadow Hay*—None or little grown. *Potatoes*—Were just a middling crop all round; a good deal of blight, and spraying was resorted to extensively;  $6\frac{1}{2}$  to 7 tons probably about the average crop per acre. *Turnips*—A disappointing crop; early swedes and yellows promised well, but owing to excessive dry weather, and then very wet weather, they went off badly; finger-and-toe very prevalent; yellows worst crop for years on many farms; swedes about 22 tons per acre; yellows 18 tons per acre. *Insects*—‘Fly’ on turnips was not too bad. *Weeds*—Land was fairly clean. *Pastures*—Owing to dry weather there was a shortage of grass all through the summer. *Live Stock*—Cattle and sheep more or less did well; fewer worms in lambs than previous year. Cattle and sheep free from disease. *Clip of Wool*—Average.

SUTHERLANDSHIRE. *Wheat*—None grown. *Barley*—A fair crop, but not grown to any extent owing to bad prices and the fact that distilleries had not been working up to the time of sowing. *Oats*—A good crop on lea, but light on black ground. *Harvest*—Was very late owing to wet weather in September and October; in the west and inland parts of the county crops were completely ruined, and in some cases not got in at all; along the coast on the east crops were secured in fair order. *Hay*—A very light crop; got in in good order on most farms, especially on the east. *Meadow Hay*—A good crop, but secured in bad condition owing to wet weather. *Potatoes*—A good crop; quality very good and no disease; quite a number of new varieties grown, and did very well. *Turnips*—A good crop of turnips; very much better than last year; very little resowing. *Insects*—Did not do much harm. *Weeds*—Crops were not injured by

weeds. *Pastures*—Very good, especially after August, and continued good till end of year owing to so little frost and snow. *Live Stock*—Did well; a shortage of lambs owing to want of milk and cold weather in April and May, but were fairly good by sale time; cattle summered well. On the whole, cattle and sheep were free from disease; maggots in some districts very bad, especially where bracken and rabbits were numerous. *Clip of Wool*—A good clip of wool, and good quality on the whole.

CAITHNESS-SHIRE. *Wheat*—Small quantities grown; on one farm 52 bushels per acre were obtained; bushel weight, 62 lb.; grain and straw rather less than last year; seed sown, 4 bushels per acre. *Barley*—Not much grown; crops similar to last year; yield, 40 to 44 bushels per acre; quality of grain and straw average; seed sown, 4 bushels per acre. *Oats*—Not so good as last year; did not thresh out well; yield, 32 to 36 bushels per acre; straw, 2 tons per acre; seed sown, 4 to 7 bushels per acre. *Harvest*—Began at usual time; cutting was general by the first week of September; stocks were slow in drying and not stacked in good condition. *Hay*—An average crop; quality good; quantity, 2 to 3 tons per acre; was slightly spoiled by rain during harvesting. *Meadow Hay*—Was rather less productive than last year; secured in bad condition owing to wet weather. *Potatoes*—Less than last year; tubers much smaller; average quantity, 5 to 8 tons per acre; blight slightly evident at the end of August; no new varieties planted. *Turnips*—Early sown turnips a good crop; late sown crops only fair; average yield—swedes, 28 tons per acre; yellows, 20 to 24 tons per acre; crop braided well; no resowing necessary. *Insects*—Practically no damage by insects or grub. *Weeds*—Crops not seriously injured by weeds; thistles abundant in cereal crops and pastures; charlock, spurrey, sorrel, corn marigold, and knotgrass very prevalent. *Pastures*—Were slower in developing; improved later; aftermath good; similar to last year. *Live Stock*—Throve well on pasture; cattle and sheep made good progress. Cattle were practically free from disease; sheep were subject to attack by the maggot-fly; frequent dipping and constant vigilance on the part of shepherds were necessary to combat this pest. *Clip of Wool*—An average clip of good quality.

ORKNEY. *Wheat*—None grown. *Bere*—Yield approximately 33 to 36 bushels per acre; bushel weight around 50 lb.; straw, about 25 cwt. per acre; seed,  $3\frac{1}{2}$  to 4 bushels per acre; the crop was an average one. *Oats*—Yield, 40 to 43 bushels per acre; straw, 28 to 30 cwt. per acre; cleaned land crop was slightly below average; lea crop normal; quality impaired owing to bad weather during harvest; seed, approximately 5 to 6 bushels per acre for Sandy and Potato types, and 7 to 8 bushels per acre for larger-grained varieties. *Harvest*—In most districts started earlier than usual; some bere was cut during the first week of August; harvesting oats reported on 17th August. *Hay*—Bulk slightly below average; about 30 to 35 cwt. per acre; unsuitable weather during harvest spoiled the crop considerably; in most districts clover was fairly plentiful; compared with last year, the yield was slightly better but the quality, owing to the bad harvest, not quite so good. *Meadow Hay*—Better

than last year, but generally harvested in poor condition, and in consequence the quality was only fair. *Potatoes*—A good average crop in most districts; 5 to 7 tons per acre; a certain amount of blight in some districts, but it did not appear to damage the tubers; lifting completed by end of November; no new varieties planted. *Turnips*—Yield varied in districts from 25 to 35 and in some cases 40 tons per acre; swedes, quality good; yellows, quality fairly good but a certain amount of rot in some districts; braided well in almost all districts and no second sowing was reported. *Insects*—No damage by insects reported. *Weeds*—No damage reported. *Pastures*—Plentiful through the season, and of average growth and quality. *Live Stock*—Generally all classes of stock made good progress throughout the season. Cattle and sheep were free from disease. *Clip of Wool*—About average.

**SHETLAND.** *Wheat*—None grown. *Barley*—None grown. *Bere*—A healthy and early crop; yield of grain, 29 bushels per acre, of 52 lb. weight per bushel; quality of grain and straw above average; seed sown, 4 bushels per acre. *Oats*—Good yield of grain—about 40 bushels per acre; weight, 38 to 42 lb. per bushel; yield of straw below average; seed sown, 4 to 6 bushels per acre; sowing completed at usual time—about end of April. *Harvest*—Harvesting of bere commenced about middle of August, and the oat harvesting commenced about 1st September; after a period of slow weather during middle of September harvesting was completed in excellent weather during the first week in October. *Hay*—Crop below average; seeds failed altogether in many cases, due to the wet autumn and winter; the 'strike' of clover plants was poor, but ryegrass filled up well and yields of 25 to 28 cwt. per acre were recorded. *Meadow Hay*—Well up to average, and yield heavier than last year; average yield of 16 to 20 cwt. per acre recorded. *Potatoes*—Above average; from 5 to 7 tons per acre; potato blight was not prevalent to any extent; a new variety, Redskin, tried out in small plots, threatens to displace Kerr's Pink as a first favourite in this area; a healthy crop with higher yield than Kerr's Pink and better cooking qualities. *Turnips*—The yield varied considerably, but on an average was from 18 to 22 tons per acre; some quite good crops were recorded up to 35 tons per acre; crop braided well and no re-sowing was required. *Insects*—Cabbage-root fly attacks on cabbage plants were reported from all districts, the attacks being more severe than usual, with the result that greater damage was done; in one case from Skeld an attack of cabbage-root fly on turnips was reported. *Weeds*—Charlock caused serious damage to the oat crop on certain farms; this weed is general throughout Shetland. *Pastures*—Growth was late in many districts, due to the severe winter and late spring, but came on later and an abundance of pasture was general even into late autumn. *Live Stock*—All classes of stock suffered from the lateness of spring growth, but by the autumn sales the leeway had been made up and stock in general were looking better than usual. Cattle and sheep were free from disease. *Clip of Wool*—The quality of the clip was up to average, but yield was below average; demand good—1s. 9d. per lb. being offered for pure Shetland wool (white); moorit and black were in less demand—from 1s. to 1s. 3d. per lb.

## THE WEATHER OF SCOTLAND IN 1936.

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**THIS** report consists of (1) a general description of the weather from month to month, and (2) a selection of rainfall returns in which each county of Scotland is represented by one or more stations. It is to be noted that all temperature readings referred to are, unless otherwise stated, from the thermometers exposed in the regulation "Stevenson Screen."

### JANUARY.

For the first ten days and from the 16th to the end of January a belt of low barometric pressure stretched from the Atlantic across Ireland and Northern England or Southern Scotland, in consequence of which there was over Scotland a greater frequency than usual of easterly or south-easterly wind. This type of weather had a tendency to recur throughout the year. The south-easterly winds in the early part of the month were strong and accompanied by unsettled weather conditions, changing over to westerly gales on the 10th and 11th. When the gales abated a moderate north-westerly current of lower temperature set in, and continued until the 15th. The chief weather event of the month was the great snowstorm of 19th to 20th, which, with a north-easterly gale, occurred in association with a deep depression which moved across Northern England and Southern Scotland. On all high ground and more especially in the north there was widespread drifting, with drifts in places of 6 feet deep, causing serious disorganisation of road and rail services. The undrifted depths of snow varied locally from 5 to 12 inches.

The average temperature over Scotland as a whole was about  $2\frac{1}{2}$  degrees below the normal for January. In the west the departure from normal was greatest—about  $4^{\circ}$  F. The highest temperature of the month,  $52^{\circ}$  F., occurred at most places on the 9th, and around the same time there were one or two mild nights with temperatures no lower than  $40^{\circ}$  F. to  $45^{\circ}$  F. Otherwise there were few mild nights; cold conditions were maintained very generally from the 11th to the 26th. Some exceptionally low screen temperatures were

recorded during the nights in this period: 6° F. at Logie Coldstone, 7° F. at Braemar and Balmoral, 8° F. at Dalwhinnie, and 11° F. at Perth. Day maxima were as low as 25° F. at Abbotsinch on the 15th and 19th, and 27° F. at Stirling on the 15th. In the same period ground frost was general and frequently severe. The lowest temperatures recorded by the thermometer freely exposed on the ground were 0° F. at Braemar on the 20th, 3° F. at Balmoral on the 20th and on the 22nd, 4° F. at Logie Coldstone on the 20th, and 6° F. at Auchincruive on the 17th.

Over East and South Scotland rainfall was well in excess of the January normal, but almost everywhere westward of a line joining the mouth of the Clyde to Tongue in Sutherland there was a deficiency. The east coast from Edinburgh to Aberdeen had approximately twice its normal fall, whilst some places along the Caledonian Canal had only one-third of their normal. The principal falls of rain occurred on 5th, 9th, and 25th or 26th, and of snow around the 20th.

Sunshine beyond the usual for January was enjoyed by most places, most of this occurring in the dry cold period between the 11th and 20th.

## FEBRUARY.

Like the two months which preceded it, February had a considerable period of severe weather, with only relatively brief interludes of mild conditions. During a large part of the month polar air flowed freely over our islands, predominantly from north or east. Compared with the normal for the season of the year there was a seven days' excess of winds from these directions.

For the third month in succession temperature was below normal again by about  $2\frac{1}{2}$  degrees, making the winter of 1935-1936 (regarded as including December, January, and February) one of the most persistently cold on record. Even the winter of 1928-29 was not on the average so cold, though February 1929 was certainly colder than February 1936. An earlier winter with somewhat similar characteristics was the well-known one of 1894-95. The coldest periods of February 1936 were about 4th to 5th and from 11th to 14th, the most notable minimum temperatures in the screen being 5° F. at Braemar, 6° F. at Balmoral, 7° F. at Dalwhinnie, and 9° F. at Peebles. At Crieff, Perth, and Abbotsinch the highest day temperature on the 13th was only 29° F. Ground frosts were frequent and severe. A temperature on the ground of 2° F. below zero was recorded at Dalwhinnie on the 13th, and at several places temperatures but little over zero occurred. Lochs and ponds in many parts and even some fast-flowing rivers were frozen



over by the 14th. The highest temperature of the month was 52° F., reached at Onich on the 9th.

In west, north, and central districts rainfall was markedly deficient, no more than half the normal being received in places along the Caledonian Canal. In the east, and particularly in Angus, Fife, and the Lothians, precipitation was well above normal. The heaviest individual falls of rain were fairly generally on the 17th to 19th, and of snow or sleet on 28th to 29th, with local heavy falls of rain in the west on 6th and over most of the east on 23rd. On the 28th to 29th the snow was accompanied by a gale, and heavy drifting occurred on high ground in the south-eastern districts. At Braemar and Balmoral snow lay on the ground continuously throughout the month.

Sunshine was under normal in the east, but well over normal in the west, making for the west the third successive month in which some places had outstanding records. From December to February inclusive Stornoway recorded a total of 178 hours of bright sunshine against an average in past years of 103 hours for the same months.

### MARCH.

March was a dry but rather sunless month, and for the first time since November the mean temperature for Scotland as a whole rose above the normal for the season of the year. The warmest period was about the 21st or 22nd, when 65° F. was reached at Kelso and Fort William, and 64° F. at Auchincruive and other places in the south-west. Some low temperatures occurred, but only in the early part of the month, 11° F. at Braemar and 12° F. at Logie Coldstone on the 3rd, and in these same early days very severe ground frosts continued.

Except for an excess of rainfall around the estuary of the Tay and locally in the Clyde valley and parts of Argyll, rainfall was below the average for the month, a considerable part of North and West Scotland having rather under half of the normal fall. In the first five days there were some falls of snow or hail, and the drifted snow of the last two days of February and the first day or two of March lay on the ground around Peebles and West Linton until the 8th, and in upper Deeside until the middle of March.

In some districts the month was the least sunny March on record, the greatest deficiencies being experienced in central, southern, and eastern districts, an effect associated with the great prevalence—unusual even for March—of easterly and south-easterly winds. In the north and west, sunshine records, though lower than usual, were not so bad.

## APRIL.

The chief feature of April was the persistent and cold current of air from the north or north-east which swept over the country for the first three weeks, with clear, sunny, and bracing weather and only trifling amounts of precipitation. About the 23rd a depression from the Atlantic brought the wind round into south-east and later into south-west, with generally mild and humid conditions thereafter.

Temperature in the mean was rather more than a degree below normal, and April had no days quite so warm as March, the highest temperature recorded in the country being 63° F. ; and despite the stronger sunshine there were days, mostly around the 14th or 21st, when even the afternoon temperature failed to reach 40° F. Low night temperatures occurred frequently, the lowest in the screen being 14° F. at Dalwhinnie and 17° F. at West Linton on the 21st. Some very low temperatures were recorded on the ground at high level stations on clear nights, notably 4° F. on the 21st, 8° F. on the 22nd, and 5° F. on the 23rd at Dalwhinnie. At a number of places ground frost occurred on twenty or more nights.

The first ten days of the month were practically rainless. In the east and in the south-west corner only one-third of the normal April rainfall was experienced, and almost everywhere there was a more or less marked deficiency. Snow, mostly in showers, fell at a number of places on the 11th, and Easter Monday, the 13th, was the coldest Easter for many years. Between 20th and 22nd wintry conditions were renewed, especially in the north and west.

At places in Ayrshire and at Arbroath excellent totals of over two hundred hours of bright sunshine were recorded, and at many other places only slightly less. These totals represent some fifty hours above the usual April average.

## MAY.

This was another month with many days of cold, dry, north-easterly winds, a deficiency of rainfall, and much sunshine.

The coldest days came at the beginning and at the end, with an intervening period which contained some very warm days. On the 10th 73° F. was reached at Ruthwell and Ardtornish, and 72° F. at Kilmarnock, whilst temperatures of 70° F. or 71° F. were recorded at some other places on the 7th, 11th, 18th, 19th, and 26th. In consequence the mean temperature of the month for the country as a whole was about 1° F. above the normal. The lowest screen temperature reported was 26° F. at Dalwhinnie on the 1st.

Apart from a few exceptional cases along the west coast from Argyll to Ayr, the whole country had a deficiency of rainfall, in some cases amounting to 50 per cent. At Perth twenty-six days were dry, and on the remaining days a total of only 0.36 inches fell—the lowest aggregate there for May since 1859 and equal to 16 per cent of the normal for the month. The first ten days were almost rainless in the west and were very dry in the east. The only important falls were about the middle of the month in association with thunderstorms. On the last two days there were sleet or snow showers on high ground.

In the matter of sunshine, excesses of thirty hours above normal occurred in Shetland, Orkney, and Lewis. In April and May taken together, no fewer than five hundred hours of bright sunshine were registered on the island of Tiree. A deficiency, due mainly to sea fog, was experienced around the Moray Firth.

### JUNE.

Excellent sunshine records, a deficiency of rain, and a rather remarkable range of temperature characterised June, and once again an excess, as compared with normal, of winds from easterly points.

The month opened with cold weather, but after the middle temperature rose considerably, so that in most districts the mean for the month was above normal; the excess was greatest in the west. Some unusually high temperatures—the highest of the year—were recorded in a warm spell at the end of the third week, 87° F. at Forres, 86° F. at Achnashellach, and 85° F. at Nairn, and at several places in South-West Scotland on the 21st. On the other hand, some very low temperatures were recorded during the nights in the early part of the month. A screen temperature of 25° F. at Dalwhinnie on the 5th was the lowest temperature recorded in Scotland in any June for at least eighty years; on the ground, on the same night, the temperature fell to 16° F.

Rainfall was deficient, except locally in small areas in the extreme south, in Islay and around Lochgilphead. Over a large area in the West Highlands and at Aberdeen and Arbroath the deficiency exceeded 50 per cent. The wettest days were the 22nd and 29th, when thunderstorms in the southern counties brought over an inch of rain and in a few places about two inches. Snow was noted on mountain-tops in the west and north on the 1st.

Except for a moderate deficiency in South-West Scotland, sunshine was above the average. In the east and extreme north some noteworthy aggregates were reported. At Craibstone the total reached was 284 hours and at Aberdeen 274

hours, the highest yet recorded in that city. In Orkney and Shetland the month was the sunniest since sunshine records commenced.

### JULY.

A deficiency of sunshine, great frequency of rain and thunderstorms, and a general prevalence of disturbed weather distinguished July from the previous month.

The mean temperature was well over normal in Orkney and Shetland and the north, and slightly over normal in the south. The first week produced the warmest days, 76° F. being reached at Forres on the 2nd, 75° F. at Fort Augustus on the 1st and 3rd, at Nairn on the 2nd, at Aberdeen on the 4th, and at Stirling on the 9th. 75° F. was reached again at some places on the last day of the month. The lowest temperatures occurred on the 27th, some 34° F. to 36° F. at high-level stations.

Rainfall was generally excessive, more than double the average at some places in South-West Scotland, though at Marchmont and over a small area in Inverness-shire the total fall was below normal. At Aberdeen there were only three days without rain; several high-level stations in Perthshire had over 10 inches. In Moray the total exceeded the total rainfall of the four preceding months. Daily falls exceeding an inch occurred in all districts between the 17th and 24th, the greatest being 3.44 inches at Forrest Lodge on the 17th. Thunder was reported from one place or another on nineteen days.

Sunshine was below normal by as much as fifty hours in a few places, though some places in the north and east had excesses. In all districts, except Orkney, Shetland, and the Outer Isles, there was less sunshine in July than in April.

### AUGUST.

There was more sun and less rain, particularly in the latter part of the month, than customarily falls to August. It was the first month in the year 1936 to have an excess, as compared with the normal, of winds from between west and south.

Mean temperature was everywhere above normal, the departure from normal rising to about 3° F. in the extreme north and on the east coast. The warmest weather was in the last week, the highest temperatures reached being 81° F. at Logie Coldstone and 80° F. at Forres and Kelso, all on the 27th. The lowest temperatures—some 36° F. to 38° F. at high-level stations—were recorded on the 7th, with some rather low ones also on 10th, 20th, and 28th.

Rainfall was deficient by over 50 per cent over a considerable area in the south-east and along the east coast south of Aberdeen, and was below the average over the greater part of Scotland. Totals slightly exceeded the average in Orkney and locally in Sutherland, Argyll, and Ayrshire. The highest daily fall, 2.27 inches, occurred at Carrbridge during a thunderstorm on the 15th. Thunder occurred fairly widely on the 4th and 15th.

Sunshine aggregates exceeded the normal over the greater part of the country, in some cases by as much as forty hours; but there were deficiencies in northern and western districts.

### SEPTEMBER.

In most places September was remarkably dull and deficient in sunshine; except towards the end, weather was warm; and in the first week it was particularly wet.

The mean temperature exceeded normal in all districts, and by as much as 4° F. in the Borders. The highest values recorded were 73° F. at Forres on the 3rd and 12th, 72° F. at Glenbranter on the 8th. The lowest temperatures occurred in the last week, 24° F. on the 28th and 27° F. on the 29th at Dalwhinnie and 28° F. on the 29th at Peebles.

A large area in the West and Central Highlands had less than the average rainfall, but elsewhere there was an excess, and this excess was greatest in the south and south-east, and exceeded 100 per cent at Dumfries. Nearly all the heavy falls of rain occurred either in thunderstorms in the first week or between the 23rd and 25th. The heaviest daily falls reported were 3.60 inches at Poolewe on the 4th and 2.18 inches at Dornock House, Dumfries, on the 24th. Slight snow fell on the Cairngorms on the 26th. On the 9th and 14th fog was rather widespread.

Except for small areas in West Argyll, Nairn, Orkney, and Shetland, sunshine was deficient. At Edinburgh it was the dullest September of the century, and several places made new low records. In Scotland the largest total was 121 hours—at Kirkwall.

### OCTOBER.

Outstanding features of October were the fine weather of the first ten days and the frequency and severity of the gales in the last fortnight.

The mean temperature of the month was slightly above normal in most districts, but rather below in the north-east. The highest temperatures occurred on the 22nd, one of 68° F. at Aberdeen being the highest there for that time of the year

since 1871. The lowest values reported were  $22^{\circ}$  F. at Braemar on the 7th and at Dalwhinnie on the 8th and  $23^{\circ}$  F. at Balmoral on the 17th. At one place or another ground frost occurred on sixteen nights.

Rainfall exceeded normal in all western districts, and was generally below normal in the east and south-east. Some unusually heavy daily falls were recorded: at Kinlochquich 4.10 inches fell on the 17th, 3.00 inches on the 24th, and the total for the month amounted to 18.58 inches. Snow or sleet occurred locally in the north between 14th and 22nd, and was quite commonly reported from the 25th to 27th. Hail also occurred rather frequently.

Gales, some of unusual severity, occurred on the 12th, from 14th to 19th, and from 22nd to 29th. The storm of the night of 26th to 27th was one of the worst in recent years, and exerted its maximum fury across Central and Southern Scotland. Extreme wind speeds of 102, 89, and 94 miles per hour were recorded in gusts at Tiree, Renfrew, and Bell Rock respectively. This gale arose very rapidly, and caused great damage on land and sea.

The totals of bright sunshine showed a slight excess over normal in the north, west, and east, and a slight deficiency in the centre and south-east, the fine weather of the early part of the month being offset by conditions in the last fortnight.

### NOVEMBER.

This month was marked by a high frequency of fog and some rather severe gales.

In all districts the mean temperature differed little from normal. The highest day temperatures recorded were  $57^{\circ}$  F. at Logie Coldstone on 21st and  $56^{\circ}$  F. at several places on 1st or 2nd or near the end of the month. The lowest screen temperatures were on the 23rd and 24th,  $16^{\circ}$  F. at Braemar and  $18^{\circ}$  F. to  $20^{\circ}$  F. at several other high-level stations. On the exposed ground some very low temperatures were registered,  $11^{\circ}$  F. at Dalwhinnie and  $14^{\circ}$  F. at Peebles and at Braemar on the 23rd, and  $13^{\circ}$  F. at Peebles on the 22nd.

Rainfall was above normal in the south and south-east, the excess in Berwickshire amounting to nearly 50 per cent. Everywhere north of the Firth of Forth there was a deficiency. Aberdeen had one of the driest Novembers on record. Snow or sleet fell on high ground in the north and west between the 4th and 16th and again on the 29th and 30th; on the 9th it occurred as far south as West Linton and on the 12th at Boghall. On the 15th hail was fairly widespread.

At one place or another fog occurred on twenty days, being persistent, widespread, and often dense between 21st and 27th.

The gales of the 29th and 30th were severe in the north, an extreme speed in gusts of eighty-seven miles per hour being reached at Stornoway.

Sunshine exceeded the normal along the east coast to a considerable extent and also in the extreme north, and was deficient elsewhere. Glasgow and Greenock had respectively totals of only fifteen and eighteen hours for the month, Stornoway and Cardross only twenty-five hours, making the month in these districts one of the dullest Novembers of the last 35 years.

#### DECEMBER.

The most notable features of December were the severe gales, excessive rainfall, and almost total lack of sunshine in the west, and the high sunshine and deficiency of rain in the east.

Mean temperatures exceeded the normal by about 2° F. in central districts, and were everywhere above normal. Maximum temperatures of 58° F. were reached at Stonehaven on the 19th and 56° F. at Onich on the 20th and at Gordon Castle and Ayr on the 31st. The lowest temperatures were on the 7th in all districts, screen minima of 11° F. at Dalwhinnie, 12° F. at Peebles being recorded, and ground minimum temperatures of 9° F. at Dalwhinnie, Balmoral, and Braemar and of 10° F. at Peebles.

Rainfall ranged from a deficiency of 50 per cent in Aberdeenshire to an excess of about 80 per cent in Western Argyll and parts of Inverness-shire, where several stations recorded totals exceeding 20 inches. Daily falls exceeding an inch occurred in all districts, particularly on the 13th, but the heaviest falls were on the 19th, when 4·87 inches was measured at Achnacarry, 4·20 inches at Glendessary and Kinlochquoich, 4·10 inches at Fort William, and 4·19 inches at Ardgour. On the 20th, 4·48 inches fell at Ceannacroe Lodge (Inverness-shire). Snow was reported on several days up to the 22nd, but none fell in the last nine days of the month. In the first week falls were general, and between 4th and 6th roads in the north and west were blocked.

Fog was reported from one place or another in the southern half of the country on twenty-one days, the Clyde area being chiefly affected.

Severe gales occurred in the first nine days and from 13th to 17th; speeds in gusts reaching ninety-five miles per hour were recorded at Stornoway on the 16th and at Tiree on the 17th, eighty-five miles per hour was reached at Edinburgh on the 16th, and ninety-nine miles per hour at Bell Rock on the 4th. The wind blew with a speed equal to or greater than 'gale force' at Stornoway during 110 hours and at Tiree during eighty-five hours in December.

Over the eastern half of the country sunshine exceeded the normal, but in the west there was a deficiency. The dullest areas of the west had totals of under ten hours, Fort William having only one hour and Onich three hours. In the three weeks ending on the 26th, Rothesay had no sunshine.

#### GENERAL NOTES.

The most notable features of the weather of the year 1936 were: (1) the intense frosts of January and February; (2) the snowstorm of 19th to 21st January; (3) the unusual frequency of easterly winds in the first half of the year and the associated low rainfall in these months in the western half of the country; (4) the rather warm and—except in the north—rather dull summer; and especially (5) the frequency and severity of gales in the last three months of the year.



# RAINFALL RECORDS FOR 1936, IN INCHES.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>Shetland—Lerwick</b>	8.64	2.89	2.87	1.85	.91	.87	3.45	2.00	1.96	4.12	2.89	3.89	80.84
<b>Orkney—Kirkwall</b>	4.81	2.16	1.59	.90	1.38	1.37	4.08	3.16	3.48	4.72	3.81	3.70	83.96
<b>Sutherland—Tongue</b>	5.62	2.46	1.23	2.80	1.26	1.08	4.63	3.08	3.66	4.70	2.75	3.90	87.11
<b>Laing</b>	5.40	3.14	1.66	1.49	1.07	1.60	6.16	3.42	2.78	5.54	3.12	5.45	89.83
<b>Ross and Cromarty—</b>													
<b>Fortrose</b>	1.88	1.35	.94	.95	1.17	.81	5.25	1.52	3.32	3.27	1.80	3.47	26.78
<b>Ardross Castle</b>	4.87	3.34	1.22	1.61	1.35	1.14	4.74	1.64	3.38	5.08	2.70	5.23	86.24
<b>Lochcarron</b>	4.06	2.96	4.21	2.85	2.92	2.14	5.91	4.88	3.98	11.01	5.89	14.83	68.63
<b>Stornoway</b>	2.85	2.24	1.57	1.96	1.18	.91	3.41	3.20	4.41	5.02	4.86	7.76	88.87
<b>Inverness—</b>													
<b>Inverness</b>	2.78	1.89	1.43	.76	.83	.96	3.66	2.47	4.13	3.13	1.98	3.47	27.48
<b>Fort-William</b>	3.22	3.01	3.09	2.53	2.09	2.51	6.06	4.58	3.43	11.12	5.49	17.67	64.65
<b>Glenquich</b>	5.32	4.35	5.18	2.80	2.57	2.80	6.03	6.52	4.86	16.00	7.42	21.25	84.20
<b>Portree</b>	4.23	2.49	2.68	2.48	2.57	2.11	4.94	4.61	3.53	8.43	5.04	10.09	63.89
<b>Nairn—Nairn</b>	2.57	1.40	.88	.74	1.23	1.01	4.35	2.90	2.26	2.83	1.47	2.59	23.17
<b>Moray—Gordon Castle</b>	4.07	1.29	.63	.97	.82	1.53	2.20	1.87	2.62	2.57	1.65	1.27	23.38
<b>Grantown</b>	2.84	1.52	.81	1.40	1.60	1.02	5.02	1.99	2.32	3.24	2.08	2.24	25.98
<b>Banff—Banff</b>	2.79	1.96	.76	.65	1.05	1.56	3.99	1.89	2.06	2.15	1.56	1.74	22.13
<b>Aberdeen—Peterhead</b>	4.16	1.59	1.20	.90	.87	.70	3.90	1.42	3.99	2.28	2.08	2.40	25.40
<b>Aberdeen (King's Coll.)</b>	4.44	1.91	1.63	.70	1.18	.84	4.67	1.41	2.60	1.18	1.86	1.98	23.90
<b>Balmoral</b>	4.25	2.30	1.30	1.25	1.64	1.10	3.44	1.19	2.93	2.60	2.74	3.59	28.53
<b>Kincardine—</b>													
<b>Fordeun</b>	5.54	4.44	2.23	.48	1.29	1.04	4.85	.89	3.33	.97	1.60	1.96	28.62
<b>Angus—</b>													
<b>Montrose (Asylum)</b>	4.30	2.72	1.89	.84	1.04	1.31	4.12	.89	3.12	.88	1.19	1.97	23.77
<b>Dundee</b>	4.37	3.72	2.24	.60	1.31	1.60	4.29	1.99	3.10	1.42	1.66	2.29	28.69
<b>Glamis Castle</b>	6.05	4.66	2.04	.42	1.12	1.49	4.30	1.41	3.03	1.67	2.71	3.23	32.13
<b>Brechin</b>	5.61	3.77	2.26	.48	1.47	1.01	6.02	1.44	3.09	1.16	1.70	2.29	30.80
<b>Perth—Blair Castle</b>	4.94	1.66	1.69	.65	.87	1.60	4.99	2.06	2.95	3.86	2.69	5.24	31.80
<b>Oriel</b>	4.98	2.80	2.60	.17	1.45	1.67	4.54	2.04	4.26	2.93	2.27	4.83	36.44
<b>Perth</b>	4.38	3.12	1.96	.65	.86	1.79	4.39	1.81	3.54	2.24	2.22	4.00	29.96
<b>Fife—Coupar</b>	4.12	4.44	2.81	.67	.86	1.24	4.22	1.06	3.18	1.72	3.31	3.09	29.72
<b>Kirkcaldy</b>	4.60	2.98	2.22	.94	1.02	1.03	3.83	1.63	3.49	1.77	2.40	2.10	27.46
<b>Kinross—Loch Leven</b>	5.05	3.59	2.64	1.21	.60	1.08	5.01	1.57	3.76	3.06	3.26	3.76	34.89
<b>Clackmannan—</b>													
<b>Tillicoultry</b>	5.77	3.18	2.70	1.85	.88	1.48	3.56	3.45	3.96	3.46	3.11	3.91	36.81
<b>Argyll—Gruline (Mull)</b>	4.70	4.22	3.30	2.11	5.75	3.00	5.40	3.87	6.03	10.34	6.52	12.86	70.24
<b>Oban</b>	3.06	2.65	2.16	1.56	2.93	2.51	4.32	3.60	3.39	7.16	4.55	9.33	48.08
<b>Glencoe Gardens</b>	4.25	4.61	3.72	2.46	2.78	2.98	6.38	4.90	4.69	10.66	6.10	17.62	70.55
<b>Inveraray</b>	6.05	4.64	5.48	3.42	3.65	3.99	6.58	6.80	4.75	14.12	7.67	18.10	85.36
<b>Campbeltown</b>	5.66	3.11	4.58	1.66	3.37	1.95	6.62	3.14	5.09	5.01	6.33	5.89	62.41
<b>Bute—Rothesay</b>	4.50	3.02	3.11	1.84	3.08	2.84	5.56	3.74	4.78	5.96	4.07	7.65	49.76
<b>Stirling—Stirling</b>	5.04	1.56	2.73	1.14	1.26	1.60	3.51	2.34	4.36	3.95	2.85	6.01	36.65
<b>Dumbarton—Arrochar</b>	5.15	5.33	7.05	3.10	3.05	2.38	3.00	5.20	6.20	12.41	6.76	15.18	81.79
<b>Helensburgh</b>	8.83	3.32	3.20	1.54	2.06	1.85	5.41	4.01	3.75	7.25	5.11	9.20	52.62
<b>Renfrew—Greenock</b>	6.55	3.74	4.04	1.55	2.73	1.73	6.26	2.75	4.12	7.72	4.94	9.90	56.48
<b>Paigley</b>	4.58	1.92	2.67	1.19	1.83	1.53	5.78	2.20	3.83	4.60	4.61	6.18	40.87
<b>Ayr—Kilmarnock</b>	4.17	1.54	2.35	1.07	1.76	1.80	6.00	4.33	3.81	5.28	3.97	6.11	42.28
<b>Ayr</b>	3.13	1.39	1.44	.66	2.25	2.80	5.65	3.81	3.26	4.18	2.76	4.33	35.11
<b>Murkirk</b>	4.17	2.26	2.54	1.01	1.54	1.44	4.29	3.23	3.77	6.13	4.10	5.68	40.11
<b>Pinmore</b>	5.95	1.94	2.97	.96	3.23	2.70	7.43	4.15	4.71	5.47	5.87	5.78	51.24
<b>Lanark—</b>													
<b>Glasgow (University)</b>	4.22	1.69	2.56	1.07	1.51	1.63	4.40	2.77	3.31	3.74	3.64	5.12	35.66
<b>Leamnahgaw</b>	4.21	2.38	1.94	1.03	1.25	1.84	3.71	2.02	3.52	4.60	3.78	4.94	35.17
<b>Biggar</b>	3.91	2.83	1.34	1.06	.73	1.72	3.33	1.65	3.80	3.65	3.68	3.88	31.76
<b>Lithgow—</b>													
<b>Uphall (Houston House)</b>	4.26	2.82	2.14	1.06	.92	1.53	5.05	1.63	3.19	2.74	3.03	3.41	31.78
<b>Midlothian—</b>													
<b>Edinburgh (University)</b>	3.64	2.74	1.88	1.35	.95	1.31	4.30	1.09	2.79	.83	2.00	2.06	24.99
<b>Gorebridge</b>	3.47	3.68	3.17	2.00	.87	1.43	4.78	1.22	2.30	2.42	3.20	2.08	31.22
<b>Oxenford Castle</b>	3.20	2.64	2.60	1.52	.74	1.35	5.08	1.41	3.11	1.93	2.45	1.95	27.88
<b>Haddington—</b>													
<b>North Berwick</b>	4.01	2.35	1.54	1.13	1.60	1.31	3.51	1.91	3.71	1.33	2.28	1.55	26.25
<b>Stobshiel Reservoir</b>	4.54	3.16	4.08	2.41	1.03	2.95	3.85	1.91	3.73	2.11	3.59	1.33	35.14
<b>Berwick—Duns Castle</b>	4.58	3.81	2.27	1.71	1.80	1.77	3.12	1.49	3.52	1.77	3.76	1.82	31.23
<b>Marchmont</b>	4.33	3.95	2.52	1.63	1.56	1.32	2.37	1.66	3.41	1.81	4.03	2.11	30.70
<b>Peebles—West Linton</b>	4.46	3.23	3.06	1.64	.67	1.67	6.78	2.43	3.14	4.49	4.04	3.38	38.99
<b>Selkirk—Whitmuir Hall</b>	4.55	3.41	2.71	1.46	1.18	2.17	5.12	1.77	3.22	2.82	4.04	3.26	35.91
<b>Roxburgh—</b>													
<b>Kelso (Broemlands)</b>	2.94	3.37	1.60	1.22	1.58	1.56	2.80	1.28	2.68	2.10	3.41	1.51	26.25
<b>Wolfelee</b>	5.41	3.31	2.93	1.69	.86	2.49	5.03	1.18	3.40	2.92	4.14	4.00	38.76
<b>Dumfries—Dumfries</b>	5.21	2.13	2.07	.65	1.35	2.08	4.23	1.51	5.28	3.86	3.83	5.12	38.02
<b>Monialve</b>	7.53	2.96	4.74	1.46	1.27	2.62	5.79	2.87	5.87	6.04	6.29	7.66	54.60
<b>Langholm</b>	7.12	3.02	3.26	1.46	.32	3.07	6.50	3.13	6.10	6.10	4.90	7.60	52.58
<b>Eskdalemuir</b>	3.18	3.39	4.58	1.47	.61	2.58	6.37	3.22	5.59	6.35	5.35	9.46	58.45
<b>Kirkcudbright—</b>													
<b>Dalbeattie (Drumstin-</b>													
<b>chall)</b>	4.40	2.45	3.34	1.65	1.39	3.79	4.46	3.88	5.66	3.75	5.54	6.07	46.38
<b>Carstairs (Shiel)</b>	9.68	4.08	5.24	1.97	2.34	2.95	3.79	3.86	6.67	9.47	6.64	9.78	71.37
<b>Auchencath</b>	5.45	2.80	3.22	.92	1.45	3.96	4.34	3.35	6.63	4.66	5.75	6.28	48.54
<b>Wigtown—Monreith</b>	5.16	1.94	2.16	.59	3.56	2.96	5.92	2.81	4.91	2.35	3.44	4.00	40.40

AGRICULTURAL STATISTICS.—RETURNED UPON 4TH JUNE 1935—(Compiled from Government Returns).

TABLE No. 1.—ACREAGE UNDER CROPS AND GRASS IN EACH COUNTY OF SCOTLAND

COUNTIES	CORN CROPS.										OTHER CROPS.												
	Total Acreage under Cereals and Grass	Arable Land	Permanent Grass	Wheat.	Barley, including Bere.	Oats.	Mixed Grain.	Hay	Peas.	Total Corn Crops.	Potatoes.	Turnips and Swedes.	Mangold.	Sugar Beet.	Cabbage.	Rape.	Vetches or Tares for Seed.	Vetches, Tares for Fodder.	Small Fruit.	Rye-Grass and other Ho- and Clover.	Other Crops.	Bare Fallow.	
1. Aberdeen	630,345	361,454	28,691	1,8	8,869	177,552	23	64	125	159	186,704	6,902	76,995	15	15	555	138	5	1,428	2,916	287,223	813	540
2. Angus	213,000	207,410	35,360	19,064	4,593	12,850	6	101	6	4	77,415	18,626	20,867	19	960	444	190	3	423	2,916	79,493	114	235
3. Argyll	106,063	45,628	64,237	10	535	13,950	94	302	4	1	13,016	1,925	4,284	6	..	443	209	1	61	13	24,711	149	989
4. Argyll	105,785	117,448	186,289	1,858	4	31,904	26	21	191	14	34,144	7,703	15,019	246	4	200	601	17	968	142	66,885	206	241
5. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
6. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
7. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
8. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
9. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
10. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
11. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
12. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
13. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
14. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
15. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
16. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
17. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
18. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
19. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
20. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
21. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
22. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
23. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
24. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
25. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
26. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
27. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
28. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
29. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
30. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
31. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
32. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
33. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
34. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
35. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
36. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
37. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
38. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
39. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
40. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
41. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
42. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
43. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
44. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
45. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
46. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
47. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
48. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
49. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
50. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	415	308	140	1,203	378	15	378	32	61,591	286
51. Argyll	187,919	139,183	13,866	47	5,133	41,163	10	4	28	37	48,831	1,492	18,019	41									

TABLE No. 2.—TOTAL PRODUCE OF WHEAT AND BARLEY, ACREAGE and YIELD per Acre in the Year 1935, compared with the YIELD for the Year 1934, and the AVERAGE of the Ten Years, 1925-1934, in each COUNTY of SCOTLAND.

COUNTIES.	WHEAT.					BARLEY, INCLUDING BEER.				
	Total Produce in 1935.	Acreage in 1935.	Yield per acre.		Average of the Ten Years 1925-1934.	Total Produce in 1935.	Acreage in 1935.	Yield per acre.		Average of the Ten Years, 1925-1934.
			1935.	1934				1935.	1934.	
Tons.	Acres.	Cwt.	Cwt.	Cwt.	Tons.	Acres.	Cwt.	Cwt.	Cwt.	
Aberdeen . . . . .	190	198	19.1	19.4	17.7	7,900	8,809	17.9	17.8	16.6
Angus . . . . .	21,000	19,054	22.5	21.5	20.4	6,100	5,792	21.0	18.0	18.1
Argyll . . . . .	10	10	20.6	23.3	18.8	360	555	13.2	14.5	15.0
Ayr . . . . .	2,400	1,855	26.0	25.6	25.3	31	40	15.3	16.7	17.8
Banff . . . . .	44	47	18.8	20.0	..	5,000	5,352	18.7	18.9	18.9
Berwick . . . . .	8,200	7,259	22.4	23.9	21.4	8,100	7,503	21.5	19.7	17.1
Bute . . . . .	2	2	21.5	..	21.0	3	3	16.9	..	17.7
Caithness . . . . .	23	17	27.1	26.8	..	310	404	15.5	16.3	16.5
Clackmannan . . . . .	440	341	25.7	21.4	24.0	41	36	22.6	22.4	20.7
Dumfries . . . . .	890	671	26.4	25.4	23.0	16	19	16.5	16.0	17.0
Dunbarton . . . . .	680	668	26.5	20.8	21.6	5	6	16.3	17.0	13.3
East Lothian . . . . .	12,000	9,105	27.4	24.6	24.5	14,000	10,847	26.1	23.1	23.0
Fife . . . . .	22,000	18,527	23.3	21.1	20.5	7,000	6,983	20.0	18.2	19.1
Inverness . . . . .	330	286	22.9	21.3	26.6	2,000	2,936	13.7	13.2	13.0
Kincairdine . . . . .	3,700	3,166	23.5	23.6	21.0	2,800	3,326	16.6	16.3	16.9
Kinross . . . . .	780	678	23.1	21.9	21.6	120	131	18.1	19.2	17.7
Kirkcudbright . . . . .	370	385	19.0	20.8	20.1	110	125	18.4	18.0	16.7
Lanark . . . . .	3,000	2,977	20.0	20.1	19.8	30	38	15.9	15.6	15.4
Mid-Lothian . . . . .	9,500	6,780	27.9	24.7	24.8	2,500	2,181	23.4	20.6	21.6
Moray . . . . .	2,600	2,176	24.5	23.1	23.3	5,900	6,780	17.4	18.1	18.9
Nairn . . . . .	130	132	19.4	19.4	..	1,100	1,403	14.6	14.9	14.7
Orkney . . . . .	..	..	..	..	..	1,900	2,335	16.2	16.3	16.2
Peebles . . . . .	16	13	24.5	20.4	22.5	46	41	22.6	18.7	18.2
Perth . . . . .	15,000	12,781	22.7	22.7	20.7	1,100	1,067	20.8	20.2	18.7
Renfrew . . . . .	2,100	1,855	22.4	22.5	22.1	1	1	14.0	..	16.5
Ross and Cromarty . . . . .	2,000	1,770	23.2	23.2	22.9	3,500	4,290	16.1	16.6	15.5
Roxburgh . . . . .	4,200	3,524	23.7	22.9	21.9	4,100	3,834	21.4	19.0	18.4
Selkirk . . . . .	3	3	17.7	15.7	..	20	20	20.0	13.3	15.7
Stirling . . . . .	3,300	2,666	25.1	23.9	19.2	190	189	20.0	19.9	16.5
Sutherland . . . . .	6	7	17.4	..	..	120	152	15.7	15.9	17.8
West Lothian . . . . .	4,700	3,485	26.9	26.5	24.7	970	781	24.8	22.8	22.6
Wigtown . . . . .	350	279	25.0	21.2	21.6	90	79	23.1	21.7	20.3
Zetland . . . . .	..	..	..	..	..	290	409	14.4	13.4	14.2
Total all Scotland	119,964	100,744	23.6	22.6	21.6	75,753	76,513	19.8	18.6	18.3

† Average of 9 years only.

\* Average of 7 years only.

‡ Average of 6 years only.

† Average of 8 years only.

TABLE NO. 3.—TOTAL PRODUCE OF OATS, ACREAGE and YIELD per Acre in the Year 1935, compared with the YIELD for the Year 1934, and the AVERAGE of the Ten Years, 1925-1934, in each COUNTY OF SCOTLAND.

COUNTIES.	OATS.				
	Total Produce in 1935.	Acreage in 1935.	Yield per acre.		Average of the Ten Years 1925- 1934.
			1935.	1934.	
	<i>Tons.</i>	<i>Acres.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>
Aberdeen . . . . .	147,000	177,352	16.6	16.3	15.0
Angus . . . . .	52,000	52,366	20.0	16.5	18.6
Argyll . . . . .	9,100	12,950	14.1	15.7	13.5
Ayr . . . . .	29,000	31,994	18.2	18.2	17.3
Banff . . . . .	34,000	43,163	15.7	17.5	16.3
Berwick . . . . .	18,000	21,906	16.6	14.8	14.7
Bute . . . . .	3,100	3,949	15.7	14.2	14.8
Caithness . . . . .	16,000	24,450	12.9	13.9	13.1
Clackmannan . . . . .	2,400	2,475	19.3	18.2	18.6
Dumfries . . . . .	28,000	31,298	18.0	16.1	15.4
Dunbarton . . . . .	4,000	5,436	14.7	15.3	15.2
East Lothian . . . . .	13,000	11,633	22.9	21.2	21.5
Fife . . . . .	30,000	35,596	17.1	15.6	18.2
Inverness . . . . .	17,000	27,518	12.0	11.5	10.5
Kincardine . . . . .	25,000	30,366	16.3	16.0	17.6
Kinross . . . . .	4,500	5,733	15.7	15.7	16.3
Kirkcudbright . . . . .	13,000	18,698	13.6	12.5	12.8
Lanark . . . . .	23,000	32,055	14.4	14.3	14.5
Mid-Lothian . . . . .	19,000	16,672	22.4	20.0	19.7
Moray . . . . .	18,000	22,150	16.6	17.0	16.5
Nairn . . . . .	4,500	6,205	14.6	14.3	13.9
Orkney . . . . .	20,000	28,987	13.6	13.6	13.6
Peebles . . . . .	4,400	5,192	17.0	17.0	15.4
Perth . . . . .	51,000	56,852	17.8	16.0	16.8
Renfrew . . . . .	5,300	7,251	14.7	15.8	14.5
Ross and Cromarty . . . . .	22,000	31,205	13.8	14.1	14.6
Roxburgh . . . . .	15,000	20,457	14.7	14.0	15.3
Selkirk . . . . .	2,100	3,463	12.2	11.9	12.6
Stirling . . . . .	14,000	14,915	18.6	16.7	17.7
Sutherland . . . . .	4,000	6,242	12.7	12.5	13.2
West Lothian . . . . .	8,900	8,700	20.6	19.2	19.9
Wigtown . . . . .	22,000	23,980	18.3	16.0	16.1
Zetland . . . . .	3,100	5,699	10.9	15.4	9.9
Total all Scotland . . . . .	681,400	826,908	16.5	15.8	15.7

TABLE NO. 4.—TOTAL PRODUCE OF POTATOES AND SUGAR BEET, ACREAGE and YIELD per Acre in the Year 1935, compared with the YIELD for Year 1934, and the AVERAGE of the Ten Years, 1925-1934, in each COUNTY of SCOTLAND.

COUNTIES.	POTATOES.					SUGAR BEET.				
	Total Produce in 1935.	Acreage in 1935.	Yield per acre.		Average of the Ten Years, 1925-1934.	Total Produce in 1935.	Acreage in 1935.	Yield per acre.		Average of the Ten Years, 1925-1934.
			1935.	1934.				1935.	1934.	
Tons.	Acres.	Tons.	Tons.	Tons.	Tons.	Acres.	Tons	Tons.	Tons.	
Aberdeen . . . . .	50,000	6,962	7.2	6.5	6.4	110	15	7.3	8.7	7.3*
Angus . . . . .	128,000	18,628	6.8	7.7	6.6	5,100	960	8.5	9.1	8.2*
Argyll . . . . .	12,000	1,925	6.1	6.6	5.6	..	..	..	..	..
Ayr . . . . .	50,000	7,702	6.5	7.4	8.3	38	4	10.1	10.0	..
Banff . . . . .	9,400	1,492	6.3	5.7	6.0	70	8	8.7	8.2	7.4†
Berwick . . . . .	11,000	2,040	5.4	5.9	5.7	3,600	398	9.0	9.9	9.3*
Bute . . . . .	6,100	863	7.0	6.5	6.5	..	..	..	..	..
Caithness . . . . .	5,600	915	6.1	6.5	6.4	..	..	..	..	..
Clackmannan . . . . .	2,500	357	6.9	7.2	5.9	..	..	..	7.0	..
Dumfries . . . . .	20,000	2,549	8.0	7.7	7.6	190	13	14.5	12.9	..
Dunbarton . . . . .	14,000	1,955	7.2	8.0	7.4	36	4	8.5	9.0	..
East Lothian . . . . .	60,000	7,718	7.8	7.7	7.4	6,000	571	10.6	10.1	8.5*
Fife . . . . .	106,000	15,308	6.9	9.4	7.3	32,000	3,786	8.5	9.3	7.4*
Inverness . . . . .	23,000	4,212	5.4	5.1	5.0	400	49	8.3	8.7	..
Kincardine . . . . .	21,000	3,981	5.4	6.2	6.0	1,300	144	9.0	9.3	..
Kinross . . . . .	9,100	1,161	7.9	7.2	6.2	55	9	6.0	4.9	..
Kirkcudbright . . . . .	6,500	1,093	5.9	6.4	6.9	..	..	..	13.0	..
Leamark . . . . .	40,000	5,845	6.9	7.5	6.9	42	5	8.4	9.0	..
Mid-Lothian . . . . .	47,000	5,497	8.5	8.7	7.7	580	61	9.6	10.5	8.4*
Moray . . . . .	9,000	1,506	6.0	5.7	6.2	3,600	427	8.5	9.4	8.2*
Nairn . . . . .	1,100	249	4.5	4.1	4.7	450	52	8.6	9.2	..
Orkney . . . . .	11,000	1,686	6.4	6.8	6.2	..	..	..	..	..
Peebles . . . . .	2,000	272	7.5	8.2	7.5	..	..	..	..	..
Perth . . . . .	106,000	17,117	6.2	6.6	6.4	6,200	642	9.6	10.6	8.8*
Renfrew . . . . .	21,000	2,729	7.7	8.5	8.2	..	..	..	10.0	..
Ross and Cromarty . . . . .	40,000	6,653	6.0	5.9	6.4	1,300	128	10.0	10.0	..
Roxburgh . . . . .	9,500	1,383	6.9	6.7	6.8	850	88	9.6	9.5	..
Selkirk . . . . .	750	131	5.7	6.3	6.2	..	..	..	..	..
Stirling . . . . .	22,000	2,917	7.5	7.6	8.0	120	12	10.0	8.9	..
Sutherland . . . . .	4,000	858	4.7	6.7	6.0	..	..	..	..	..
West Lothian . . . . .	20,000	2,384	8.2	8.3	7.9	150	16	9.6	9.8	..
Wigtown . . . . .	11,000	1,712	6.7	7.3	7.4	580	67	10.1	10.0	10.0†
Zetland . . . . .	9,400	1,796	5.3	4.0	5.7	..	..	..	..	..
Total . . . . .	885,950	131,506	6.7	7.3	6.9	65,771	7,449	8.9	9.5	8.4*

\* Average of 7 years only.

† Average of 6 years only.

TABLE No. 5.—TOTAL PRODUCE OF TURNIPS, SWEDES, and MANGOLDS, ACREAGE and YIELD per Acre in the Year 1935, compared with the YIELD for the Year 1934, and the AVERAGE of the Ten Years, 1925-1934, in each COUNTY of SCOTLAND.

COUNTIES.	TURNIPS AND SWEDES.					MANGOLDS.				
	Total Produce in 1935.	Acreage in 1935.	Yield per Acre.		Average of the Ten Years, 1925-1934.	Total Produce in 1935.	Acreage in 1935.	Yield per Acre.		Average of the Ten Years, 1925-1934.
			1935	1934.				1935	1934.	
Tons.	Acres.	Tons.	Tons.	Tons.	Tons.	Acres.	Tons.	Tons.	Tons.	
Aberdeen . . . . .	1,012,000	76,995	13.5	9.4	14.2	210	16	13.4	12.1	13.2*
Angus . . . . .	581,000	26,867	21.6	15.2	17.0	390	19	20.2	22.2	17.0
Argyll . . . . .	81,000	4,234	19.1	20.0	16.3	120	6	19.3	22.4	14.9
Ayr . . . . .	98,000	6,574	14.9	18.6	19.3	5,600	246	22.9	22.9	22.0
Banff . . . . .	345,000	18,019	19.2	14.0	15.7	6	1	4.8	10.0	..
Berwick . . . . .	279,000	15,927	17.5	15.2	17.3	6,900	415	16.6	20.0	18.3
Bute . . . . .	23,000	1,139	20.0	21.3	16.3	160	8	20.0	25.0	17.6†
Caithness . . . . .	198,000	9,376	21.1	22.0	18.9	..	..	..	..	..
Clackmannan . . . . .	15,000	682	21.7	12.1	13.4	..	..	..	..	..
Dumfries . . . . .	200,000	13,623	14.7	14.1	17.9	4,100	224	18.1	17.8	17.2
Dunbarton . . . . .	18,000	1,157	15.2	12.6	17.4	340	15	26.0	19.5	20.4
East Lothian . . . . .	178,000	9,886	18.0	10.5	18.2	17,000	679	24.5	22.6	21.5
Fife . . . . .	270,000	17,143	15.8	12.0	15.8	980	54	18.0	20.0	18.4
Inverness . . . . .	91,000	7,940	11.5	10.6	12.5	30	3	11.2	..	..
Kincardine . . . . .	230,000	14,173	16.2	14.4	18.8	15	2	10.0	..	..
Kinross . . . . .	48,000	2,138	22.6	12.5	13.9	..	..	..	10.0	..
Kirkeudbright . . . . .	82,000	8,510	9.6	12.7	14.8	1,200	81	15.0	13.9	16.1
Lanark . . . . .	170,000	8,703	19.5	14.3	18.6	490	26	18.5	18.1	19.6
Mid-Lothian . . . . .	139,000	7,760	17.9	11.7	17.7	1,600	69	23.8	23.6	21.6
Moray . . . . .	200,000	12,212	16.4	15.7	17.0	360	19	18.8	18.4	18.4
Nairn . . . . .	40,000	3,584	11.0	9.9	12.2	10	1	10.0	..	..
Orkney . . . . .	139,000	11,981	11.6	11.5	11.6	..	..	..	..	..
Peebles . . . . .	46,000	2,389	19.2	11.0	18.0	..	..	..	20.0	..
Perth . . . . .	401,000	21,250	18.9	14.0	17.1	660	39	17.1	20.0	15.8
Renfrew . . . . .	33,000	1,805	18.5	19.2	18.0	90	5	19.2	20.0	18.9
Ross and Cromarty . . . . .	196,000	12,656	15.5	12.7	15.6	80	2	14.0	11.1	13.5
Roxburgh . . . . .	222,000	13,982	15.9	9.0	14.6	4,200	160	26.4	21.3	16.3
Selkirk . . . . .	26,000	1,889	14.0	9.0	14.2	180	8	21.1	19.0	16.6*
Stirling . . . . .	61,000	3,359	18.3	12.4	18.7	100	8	12.6	15.8	18.0†
Sutherland . . . . .	39,000	2,261	17.3	9.5	15.4	..	..	..	..	..
West Lothian . . . . .	52,000	2,700	19.1	13.2	18.6	530	19	28.0	21.0	21.3
Wigtown . . . . .	154,000	10,279	15.0	14.5	16.8	5,800	286	20.4	19.4	18.0
Zetland . . . . .	14,000	992	18.9	23.7	12.5	..	..	..	..	..
Total . . . . .	5,711,000	352,175	16.2	12.9	16.0	51,101	2,409	21.1	20.6	19.6

\* Average of 8 years only.

† Average of 9 years only.

TABLE No. 6.—TOTAL PRODUCE OF HAY from Rye-Grass and other Rotation Grasses and Clover, also Total from Permanent Grass, ACREAGE, and YIELD per Acre in the Year 1935, compared with the YIELD for the Year 1934, and the AVERAGE of the Ten Years, 1925-1934, in each COUNTY of SCOTLAND.

COUNTIES.	FROM RYE-GRASS AND OTHER ROTATION GRASSES AND CLOVER.					FROM PERMANENT GRASS. (Including Timothy.)				
	Total Produce in 1935.	Acreage in 1935.	Yield per Acre		Average of the Ten Years, 1925-1934.	Total Produce in 1935.	Acreage in 1935.	Yield per Acre.		Average of the Ten Years, 1925-1934.
			1935.	1934				1935.	1934.	
Tons	Acres.	Cwt.	Cwt.	Cwt.	Tons.	Acres.	Cwt.	Cwt.	Cwt.	
Aberdeen	86,000	55,808	31.2	29.5	26.2	3,100	2,779	22.6	22.3	20.7
Angus	48,000	22,357	43.0	36.7	38.3	3,600	1,996	35.8	28.9	31.0
Argyll	14,000	10,819	25.5	32.4	30.6	16,000	15,112	21.8	24.1	27.8
Ayr	38,000	24,536	30.7	31.9	32.1	47,000	23,659	40.5	41.9	41.9
Banff	19,000	11,845	33.2	34.2	29.4	690	653	21.0	25.0	21.6
Berwick	26,000	18,294	39.7	33.2	34.1	5,390	3,389	32.0	27.5	28.0
Bute	3,700	2,207	33.3	32.5	35.1	750	448	33.9	30.9	33.3
Caithness	10,000	9,323	21.5	24.6	18.0	430	1,095	7.8	7.5	8.3
Clackmannan.	8,100	1,123	55.4	51.2	48.6	3,000	1,014	53.0	49.2	51.2
Dumfries	33,000	10,978	33.1	35.7	32.8	25,500	19,885	25.1	27.1	29.0
Dunbarton	8,300	4,643	35.8	39.3	38.8	3,900	2,277	34.3	37.8	37.7
East Lothian	21,000	8,263	50.9	47.7	49.4	2,700	1,581	34.4	27.3	31.7
Fife	58,000	24,126	48.3	50.1	44.7	7,500	3,770	39.5	38.0	36.2
Inverness	11,000	11,298	20.3	21.7	22.0	7,400	10,665	13.9	15.5	17.9
Kincardine	21,000	12,589	33.1	28.1	32.2	880	592	29.6	23.3	25.4
Kinross	6,100	2,714	45.1	45.2	44.2	1,500	760	39.1	34.3	35.8
Kirkcudbright	13,000	10,835	34.3	27.5	27.4	17,000	12,564	26.1	26.3	26.2
Lanark	52,000	28,222	36.9	37.1	35.4	22,000	12,493	33.0	34.0	33.2
Mid-Lothian	25,000	9,944	50.4	45.7	48.3	5,800	3,621	32.1	31.0	34.8
Moray	11,000	6,455	33.2	32.3	24.5	350	297	23.6	19.8	18.5
Nairn	1,800	1,675	21.1	20.6	20.5	70	95	14.3	13.1	15.3
Orkney	27,000	11,075	49.8	58.7	34.9	870	844	20.7	22.5	15.1
Peebles	4,700	2,306	40.3	35.4	34.8	4,400	2,624	33.9	23.8	29.6
Perth	49,000	30,543	31.9	30.0	30.2	17,100	12,459	27.9	30.7	29.5
Renfrew.	15,000	7,085	42.5	43.0	42.5	13,500	6,167	43.5	45.1	44.1
Ross and Cromarty	13,000	12,812	20.9	26.6	20.7	4,500	5,680	16.0	16.3	16.4
Roxburgh	16,000	10,076	31.0	30.6	32.4	11,000	8,395	25.4	21.9	29.3
Selkirk	1,700	1,369	25.2	25.7	32.3	2,400	2,262	21.3	20.4	30.7
Stirling	17,000	9,269	36.6	35.4	40.7	18,000	7,997	44.1	42.3	46.3
Sutherland	4,400	4,460	19.6	16.7	19.3	1,600	1,906	16.6	14.2	16.7
West Lothian	16,000	6,060	51.7	48.8	48.1	3,100	1,499	41.4	37.4	41.6
Wigtown	11,000	8,325	24.1	29.0	31.7	8,800	6,753	26.1	30.8	31.5
Zetland	2,800	1,689	33.7	44.7	29.7	2,300	2,559	17.7	23.5	19.0
Total	686,600	396,423	34.6	34.3	32.9	262,040	178,781	29.3	30.1	31.5

TABLE No. 7.—HAY from Permanent Grass :—TOTAL PRODUCE, ACREAGE, and YIELD PER ACRE, in 1935, in each COUNTY OF SCOTLAND, compared with the YIELD for 1934, and the AVERAGE of the Ten Years, 1925-1934.

COUNTIES.	HAY FROM TIMOTHY MEADOWS. (Also included with Permanent Grass.)				
	Total Produce in 1935.	Acreage in 1935.	Yield per acre.		Average of the Ten Years, 1925- 1934.
			1935.	1934.	
	<i>Tons.</i>	<i>Acres.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>
Aberdeen . . . . .	230	147	31·1	26·9	33·1
Angus . . . . .	1,400	602	45·6	35·0	40·8
Argyll . . . . .	1,200	760	30·5	28·8	34·6
Ayr . . . . .	29,000	12,769	46·2	48·6	47·3
Banff . . . . .	16	9	35·6	26·0	..
Berwick . . . . .	500	316	31·1	29·8	27·5
Bute . . . . .	140	80	35·8	31·2	35·0
Caithness . . . . .	2	8	5·0	7·6	..
Clackmannan . . . . .	2,800	936	59·1	49·8	54·1
Dumfries . . . . .	7,400	4,757	31·0	32·8	31·3
Dunbarton . . . . .	1,800	812	43·6	48·5	46·6
East Lothian . . . . .	490	207	47·0	45·8	52·8
Fife . . . . .	3,800	1,497	50·5	46·8	48·6
Inverness . . . . .	..	..	..	..	22·3*
Kincardine . . . . .	280	138	40·0	35·0	44·3*
Kinross . . . . .	380	189	40·0	34·8	41·7
Kirkcudbright . . . . .	4,900	2,825	34·6	36·1	35·1
Lanark . . . . .	14,000	7,196	39·5	40·6	39·0
Mid-Lothian . . . . .	2,100	830	51·3	52·0	49·3
Moray . . . . .	65	26	50·0	..	..
Nairn . . . . .	..	..	..	..	..
Orkney . . . . .	..	..	..	..	..
Peebles . . . . .	800	357	45·3	46·0	40·7
Perth . . . . .	7,200	3,879	37·1	46·0	43·4
Renfrew . . . . .	8,500	3,760	45·0	47·7	47·7
Ross and Cromarty . . . . .	200	180	21·7	20·1	23·4†
Roxburgh . . . . .	870	544	31·9	29·5	33·0
Selkirk . . . . .	370	257	28·8	26·8	32·7
Stirling . . . . .	14,000	5,541	50·4	49·7	54·5
Sutherland . . . . .	..	..	..	..	..
West Lothian . . . . .	1,900	697	53·9	50·2	50·5
Wigtown . . . . .	2,400	1,294	37·1	41·0	38·6
Zetland . . . . .	..	..	..	..	..
Total all Scotland . . . . .	106,743	50,613	42·3	43·6	44·3

\* Average of 6 years only.

† Average of 8 years only.



TABLE NO. 8.—NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS IN EACH COUNTY OF SCOTLAND AS RETURNED ON 4TH JUNE 1935.

COUNTIES.	HORSES (including Ponies).				CATTLE.				SHEEP.				PIGS.				
	Used for Agricul- ture, &c.	Stallions, &c.	Unbroken Horses.		Cows in Milk.	Cows in Calf, but not in Milk.	Held in Calf.	Bulls used for Breeding.	Other Cattle.		Ewes kept for Breeding.	Rams to be used for Service.	Other Sheep.		Sows Kept for Breeding.	Other Pigs.	
			1 Year & above.	Under 1 Year.					2 Years & above.	1 Year & 2 Years.			1 Year and above.	Under 1 Year.			
1. Aberdeen . . .	16,970	64	2,855	1208	2,285	36,966	4,083	2,654	1,532	35,979	57,426	38,616	4,619	42,770	196,792	4,490	30,318
2. Angus . . .	6,307	5	407	111	988	10,325	1,325	761	483	18,171	14,123	9,311	2,948	18,378	100,785	1,890	171
3. Argyll . . .	3,214	13	512	137	846	15,976	2,949	2,145	781	6,112	20,464	19,542	9,949	97,961	249,302	540	4,316
4. Ayr . . .	5,821	46	840	339	657	45,124	8,044	14,785	2,325	9,123	24,448	24,519	190,134	96,376	183,614	1,959	177
5. Banff . . .	4,940	14	885	428	816	10,567	1,195	672	415	4,669	14,271	11,798	45,997	12,457	57,044	1,068	199
6. Berwick . . .	2,866	12	344	105	440	5,371	945	849	341	5,899	8,816	6,166	143,212	8,848	38,423	202,864	1,301
7. Bute . . .	743	7	137	45	105	2,568	401	712	149	1,172	2,418	2,284	21,237	611	6,250	76	10
8. Caithness . . .	3,328	13	638	306	928	6,456	696	488	172	1,234	5,966	6,480	85,831	2,440	23,389	105,035	276
9. Clackmannan . . .	342	2	62	32	80	1,176	266	270	69	915	1,024	627	6,353	825	4,705	194	16
10. Dumfries . . .	4,210	19	811	324	693	22,824	2,958	7,756	1,328	9,565	19,483	19,668	264,046	7,146	69,076	2,085	185
11. Dunbarton . . .	1,003	18	151	41	128	3,239	1,131	1,410	283	1,216	2,921	2,543	34,638	1,299	9,101	326	32
12. East Lothian . . .	2,336	2	266	40	171	2,400	371	346	131	6,696	5,033	2,846	57,975	1,649	19,680	77,752	4,920
13. Fife . . .	5,514	30	909	280	629	11,755	1,974	1,981	645	13,815	14,244	9,517	60,357	2,130	10,477	2,109	288
14. Inverness . . .	4,743	28	495	172	495	18,416	2,460	1,210	593	3,158	8,241	11,694	224,306	6,387	68,079	166,434	475
15. Kinross . . .	3,029	3	344	147	332	5,884	688	593	243	5,695	9,903	6,376	80,673	791	4,508	58	55
16. Kirkcaldy . . .	624	1	129	32	34	1,550	378	232	95	718	2,460	1,395	16,111	533	3,244	197	22
17. Kirkcubright . . .	2,790	18	507	184	286	18,495	1,615	6,585	1,035	8,711	16,742	13,012	177,314	4,778	44,620	179,567	1,512
18. Lanark . . .	4,821	30	705	247	458	28,608	7,001	8,170	1,557	7,643	13,844	14,131	110,031	3,011	32,747	13,378	151
19. Mid-Lothian . . .	2,308	5	172	60	335	6,626	1,088	961	277	4,149	4,165	2,794	75,265	1,882	26,507	19,968	117
20. Moray . . .	2,812	13	413	216	253	5,862	707	440	257	2,813	8,394	5,682	21,567	588	4,747	153	135
21. Nairn . . .	771	2	148	66	137	1,945	1,177	138	102	536	1,945	1,945	6,321	583	2,655	49	505
22. Orkney . . .	4,503	20	674	411	684	10,238	1,306	974	260	4,700	11,171	10,828	28,123	812	6,949	179	31
23. Peebles . . .	563	9	46	14	79	1,884	359	577	137	871	2,900	1,761	90,538	9,293	38,466	32	807
24. Perth . . .	7,537	46	902	333	776	16,620	2,280	2,922	974	12,252	21,829	18,188	201,131	20,735	86,550	99	258
25. Renfrew . . .	1,598	10	207	60	258	10,937	2,742	2,792	582	1,676	4,807	4,489	20,884	724	75,369	175	58
26. Ross & Cromarty . . .	4,213	8	390	180	419	13,489	2,973	1,915	392	3,411	7,725	4,036	58,748	31,248	1,248	94	4,455
27. Roxburgh . . .	2,506	10	277	57	604	6,031	1,066	1,194	385	5,671	7,484	6,081	228,105	6,078	274,789	606	57
28. Selkirk . . .	410	2	42	17	95	1,280	187	257	69	475	1,118	967	86,562	1,960	20,882	94	10
29. Stirling . . .	2,485	18	467	137	321	9,080	2,212	2,567	542	6,708	10,378	6,230	54,511	1,695	33,838	70	4,592
30. Southland . . .	1,353	5	93	51	131	3,388	608	286	71	420	1,550	1,673	90,499	2,476	89,597	77	6
31. West Lothian . . .	1,269	5	170	58	164	4,291	914	851	234	3,244	2,897	2,332	8,996	5,865	11,981	52	3,541
32. Wigtown . . .	3,161	23	617	240	229	27,423	1,447	1,157	1,091	7,495	11,744	12,333	68,003	2,069	13,465	195	17,811
33. Zetland . . .	1,564	7	106	37	173	4,239	659	298	59	860	2,204	2,649	35,180	2,688	65,432	6	182
Total . . .	110,554	507	15,460	6,144	14,929	370,752	55,825	70,631	17,612	195,222	329,731	278,601	941,550	3,388,090	31,993	3,066	235,164

\* Including Mares kept for breeding.

† Above two years old used, or intended to be used, for service.

TABLE NO. 9.—QUANTITY AND VALUE OF CORN, &amp;c., imported into the United Kingdom in the undermentioned Years.

[From Trade and Navigation Returns.]

	Quantities.			Values.		
	1934.	1935.	1936.	1934.	1935.	1936.
	Cwt.	Cwt.	Cwt.	£	£	£
Wheat from—						
British India . . .	166,368	158,969	8,258,392	59,874	56,429	1,457,684
Australia . . .	21,658,112	17,684,450	23,274,198	5,850,444	5,369,537	8,614,068
Canada . . .	35,702,970	36,894,158	67,841,976	11,366,578	12,833,614	22,390,024
Other British Coun- tries . . .	8,984	42	44,974	2,175	21	11,157
Soviet Union (Russia) . . .	2,095,212	6,910,464	167,306	439,192	2,194,258	55,771
Germany . . .	2,019,340	175,341		894,476	46,434	
Roumania . . .	1,553,541	1,856,918	4,418,714	323,255	479,209	1,622,312
United States of America . . .	131,424	593,029	45,405	28,089	161,037	20,687
Argentine Republic . . .	35,081,038	22,752,391	956,959	8,188,171	6,047,832	355,458
Other Foreign Coun- tries . . .	4,178,405	14,220,147	10,501,473	959,658	3,275,428	3,410,621
Total . . .	102,625,344	101,225,904	100,864,397	27,611,902	30,463,899	87,937,777
Wheat products —						
Meal and flour from—						
Australia . . .	1,926,926	1,805,657	2,469,612	629,836	602,141	1,061,222
Canada . . .	4,226,428	4,225,592	4,104,182	1,806,598	2,015,248	2,132,712
Other British Coun- tries . . .	977	3,594	3,971	409	1,072	1,008
France . . .	1,285,394	887,839	730,662	279,838	248,068	278,708
Italy . . .	411,389	422,250		62,857	84,276	
United States of America . . .	128,642	89,528	77,586	60,890	48,805	49,605
Argentine Republic . . .	246,132	202,451	272,883	51,329	50,802	36,618
Other Foreign Coun- tries . . .	1,221,251	344,556	708,476	268,058	108,959	238,678
Total . . .	9,447,139	7,981,469	8,366,722	3,149,865	3,219,866	3,843,546
Barley . . .	15,476,301	17,097,486	18,319,862	3,896,173	4,169,341	5,051,081
Oats . . .	3,210,213	3,558,614	2,161,701	764,006	1,038,205	604,321
Peas, not fresh . . .	1,589,932	1,601,599	1,962,504	1,128,622	902,937	1,051,068
Beans, not fresh . . .	972,411	505,426	1,269,512	402,215	308,294	559,911
Maize . . .	61,350,081	59,455,687	73,296,186	13,833,664	12,176,121	16,261,434
Maize products . . .	2,747,454	4,762,584	2,581,636	829,290	1,531,822	1,148,411
Oat products . . .	559,099	419,134	515,299	458,969	450,418	600,114
Rice . . .	2,552,332	2,161,457	2,221,369	988,588	905,284	1,016,182
Other kinds of grain . . .	675,187	936,945	666,652	262,482	295,392	193,586
Other products . . .	1,696,268	983,025	857,516	1,064,403	729,860	696,712
Farinaceous substances not elsewhere speci- fied and Malt . . .	1,006,498	1,053,630	1,031,942	503,922	542,030	611,023
Total of corn, &c. . .	91,834,746	92,620,587	104,926,299	23,629,339	23,048,704	27,798,738
Total of Group . . .	203,907,229	201,827,960	214,102,418	54,390,606	56,731,969	69,575,056

TABLE NO. 10.—SUMMARY OF TOTAL VALUES APPEARING IN TABLE NO. 9 OF GRAIN AND FLOUR imported into the United Kingdom for the years 1934, 1935 and 1936.

	1934.	1935.	1936.
From—	£	£	£
Union of South Africa . . . . .	782,116	1,041,412	388,553
Southern Rhodesia . . . . .	117,380	52,409	232,965
Kenya . . . . .	6,830	14,326	200,345
British India . . . . .	799,675	782,244	2,082,375
British Malaya . . . . .	205,588	250,279	290,439
Australia . . . . .	6,833,809	6,385,431	10,070,305
Canada . . . . .	15,323,855	17,652,855	27,122,762
Other British Countries . . . . .	228,709	151,085	148,541
Soviet Union . . . . .	943,123	3,596,651	575,163
Denmark . . . . .	109,490	98,114	214,440
Germany . . . . .	874,745	177,986	237,824
Netherlands . . . . .	787,220	659,598	643,203
Java . . . . .	185,030	168,847	179,962
Belgium . . . . .	535,958	560,885	802,263
France . . . . .	899,313	2,185,214	1,785,678
Madagascar . . . . .	124,719	108,587	195,727
Spain . . . . .	181,348	70,656	26,704
Italy . . . . .	114,056	122,385	27,010
Roumania . . . . .	1,039,042	789,198	2,981,279
Iraq . . . . .	1,160	394,574	857,539
Iran . . . . .	718,457	42,843	88,829
Japan . . . . .	422,782	394,367	305,763
United States of America . . . . .	1,169,334	1,218,197	1,377,004
Chile . . . . .	277,764	101,527	234,070
Argentine Republic . . . . .	20,504,027	17,254,419	15,378,972
Other Foreign Countries . . . . .	1,250,581	1,863,380	3,127,321
Total . . . . .	54,390,606	56,731,969	69,575,056

TABLE NO. 11.—SUMMARY OF TOTAL VALUES APPEARING IN TABLE NO. 16 of DAIRY PRODUCE imported into the United Kingdom for the years 1934, 1935 and 1936.

	1934.	1935.	1936.
From—	£	£	£
Irish Free State . . . . .	2,331,633	2,473,071	2,823,313
Union of South Africa . . . . .	254,887	609,678	565,052
Australia . . . . .	8,712,501	9,806,132	8,902,765
New Zealand . . . . .	14,861,898	16,131,751	18,569,454
Canada . . . . .	1,639,735	1,888,781	2,354,144
Other British Countries . . . . .	47,611	203,629	296,858
Soviet Union . . . . .	1,120,111	1,678,876	1,648,040
Finland . . . . .	808,816	744,307	904,301
Estonia . . . . .	395,699	479,286	545,380
Latvia . . . . .	421,223	701,861	846,780
Lithuania . . . . .	432,773	679,662	1,017,323
Sweden . . . . .	1,037,305	856,072	769,612
Norway . . . . .	53,118	33,903	71,987
Denmark . . . . .	12,477,610	13,023,905	14,734,648
Poland . . . . .	672,166	912,257	1,421,470
Germany . . . . .	70,581	22,391	15,480
Netherlands . . . . .	3,703,486	4,360,942	6,500,866
Belgium . . . . .	150,483	139,929	306,399
France . . . . .	88,994	85,226	249,469
Switzerland . . . . .	108,495	109,408	127,784
Italy . . . . .	337,249	338,750	60,948
China . . . . .	2,424,683	2,350,129	2,926,609
United States of America . . . . .	59,080	70,790	5,547
Argentine Republic . . . . .	323,454	281,369	726,721
Other Foreign Countries . . . . .	369,113	437,129	976,216
Total . . . . .	52,882,659	53,419,229	67,367,166

TABLE NO. 12.—QUANTITIES AND VALUES OF CORN AND FOOD PRODUCTS imported into the United Kingdom in the Year 1936, with the Corresponding Figures for 1934 and 1935.

[From Trade and Navigation Returns.]

	Quantities.			Values.		
	1934.	1935.	1936.	1934.	1935.	1936.
<b>ANIMALS, LIVING, FOR FOOD:—</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Cattle . . . . .	509,537	599,122	695,060	4,403,165	4,634,301	6,058,748
Sheep and lambs . . . . .	362,989	278,969	455,583	486,598	356,812	643,684
Pigs . . . . .	138,913	127,969	120,721	884,774	473,506	413,169
Total value . . . . .	1,006,439	1,006,080	1,271,364	5,224,527	5,464,619	7,115,601
<b>GRAIN, FLOUR, &amp;c.:—</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Wheat . . . . .	102,625,844	101,225,904	100,809,897	27,611,902	30,463,899	37,937,777
Wheat meal and flour . . . . .	9,447,139	7,981,469	8,366,722	3,149,365	3,219,386	3,843,546
Barley . . . . .	15,476,301	17,097,486	18,531,982	8,893,178	4,169,841	5,061,031
Oats . . . . .	3,210,213	3,553,614	2,161,701	763,806	1,038,306	604,321
Pears, not fresh . . . . .	1,580,932	1,601,599	1,962,504	1,128,822	902,937	1,051,058
Beans, not fresh . . . . .	972,431	595,426	1,269,512	402,265	308,294	559,911
Maize or Indian corn . . . . .	61,350,031	59,455,687	73,296,186	13,333,684	12,176,121	16,261,434
Maize products . . . . .	2,747,454	4,762,584	2,561,636	829,290	1,531,822	1,148,411
Oat products . . . . .	558,099	419,134	515,299	458,969	450,418	600,114
All other products . . . . .	1,696,268	983,025	887,516	1,064,403	728,860	696,712
Rice . . . . .	2,552,332	2,161,457	2,221,369	968,563	905,284	1,016,182
Other kinds of grain . . . . .	675,187	936,945	666,652	262,482	295,392	193,586
Farinaceous substances not elsewhere specified . . . . .	1,006,496	1,053,630	1,031,942	503,922	542,030	611,028
Total value . . . . .	203,907,229	201,827,960	214,102,418	54,390,606	56,731,969	69,575,056
<b>DAIRY PRODUCE:—</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Butter . . . . .	9,695,394	9,608,016	9,752,043	33,271,706	39,328,128	44,424,184
Margarine . . . . .	19,598	17,741	43,220	30,825	27,963	66,925
Cheese . . . . .	2,988,539	2,714,551	2,676,489	7,014,517	6,649,098	7,789,591
Milk, condensed, un-sweetened . . . . .	342,001	293,978	232,103	626,643	519,980	364,115
Milk, condensed, sweetened . . . . .	122,564	87,709	89,347	196,578	145,517	148,254
Milk, separated or skimmed . . . . .	1,628,200	1,404,697	1,363,344	1,985,186	1,880,041	1,464,296
Milk powder, unsweetened . . . . .	251,913	219,144	242,009	461,561	390,284	480,612
Cream . . . . .	85,898	74,670	76,642	248,042	229,485	254,787
Other Produce not specified . . . . .	..	..	..	50,055	45,527	35,867
Total . . . . .	15,133,607	14,420,306	14,475,197	43,885,063	48,716,038	54,978,631
<b>Eggs in Shell . . . . .</b>	<b>Gt. Hunds.</b>	<b>Gt. Hunds.</b>	<b>Gt. Hunds.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Eggs in Shell . . . . .	18,734,209	19,766,811	24,653,222	7,051,006	7,768,489	9,901,617
<b>Eggs not in Shell . . . . .</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Eggs not in Shell . . . . .	840,297	814,980	924,414	1,946,590	1,934,702	2,486,918
Total value . . . . .	..	..	..	8,997,596	9,703,191	12,388,535

TABLE No. 13.—QUANTITIES AND VALUES OF MEAT OF ALL KINDS imported into the United Kingdom in the year 1936, with the corresponding figures for 1934 and 1935.

	Quantities.			Values		
	1934.	1935.	1936.	1934.	1935.	1936.
<b>BEEF:—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Fresh and salted . . . .	4,607	2,292	5,882	8,816	3,695	8,686
Chilled . . . . .	8,250,668	8,485,549	8,779,991	18,811,605	19,959,754	14,560,269
Frozen . . . . .	2,168,524	1,720,927	1,490,942	2,715,986	2,349,045	1,907,789
Boned . . . . .	540,240	594,010	664,966	709,515	840,918	906,263
Other descriptions . . . .	700,776	663,166	782,711	1,665,118	1,556,364	1,849,199
Tongues—tinned, canned, &c. . . . .	90,976	89,676	95,054	839,071	774,520	772,605
Other parts . . . . .	856,061	880,332	921,572	1,783,063	1,860,219	2,244,964
Extracts and Essences . .	66,615	61,755	87,531	524,103	406,927	556,111
<b>VEAL—frozen . . . . .</b>	<b>133,711</b>	<b>179,905</b>	<b>191,625</b>	<b>282,486</b>	<b>317,851</b>	<b>310,394</b>
<b>MUTTON AND LAMB:—</b>						
Mutton and Lamb—fresh .	12,882	53,347	21,324	45,855	163,962	69,689
Mutton—frozen . . . .	1,596,815	1,714,464	1,344,401	3,015,003	2,816,148	2,453,199
Lamb—frozen . . . . .	4,881,979	4,983,693	4,958,998	14,531,451	14,574,185	14,800,916
Tinned, canned, &c. . . .	47,016	63,899	68,046	145,931	197,720	185,590
Other descriptions . . . .	153,466	172,746	192,716	391,558	464,985	543,129
<b>PIG PRODUCTS—</b>						
Bacon . . . . .	7,598,262	6,926,905	6,569,633	30,047,164	27,394,26	27,266,699
Hams . . . . .	728,273	676,707	671,704	3,125,058	3,067,087	2,989,008
Pork—fresh . . . . .	143,771	142,841	115,973	878,700	342,868	292,135
Pork—chilled or frozen .	1,105,420	915,098	1,023,212	2,926,563	2,509,315	2,779,806
Tinned—canned, tongues, &c. . . . .	205,206	160,202	157,787	1,359,689	1,125,176	1,062,334
Other descriptions . . . .	186,884	166,907	182,779	310,892	292,519	366,737
<b>RABBITS . . . . .</b>	<b>525,628</b>	<b>271,022</b>	<b>237,164</b>	<b>651,858</b>	<b>358,612</b>	<b>363,850</b>
<b>ALL OTHER KINDS OF MEAT .</b>	<b>176,951</b>	<b>171,894</b>	<b>205,633</b>	<b>590,665</b>	<b>612,559</b>	<b>751,910</b>
<b>POULTRY—dead . . . . .</b>	<b>452,193</b>	<b>422,535</b>	<b>422,117</b>	<b>1,613,376</b>	<b>1,689,749</b>	<b>1,656,900</b>
<b>GAME—dead . . . . .</b>	<b>27,130</b>	<b>29,562</b>	<b>30,478</b>	<b>95,167</b>	<b>80,286</b>	<b>130,457</b>
<b>Totals . . . . .</b>	<b>180,654,044</b>	<b>29,549,484</b>	<b>29,173,744</b>	<b>81,518,831</b>	<b>77,759,114</b>	<b>78,829,394</b>

TABLE No. 14.—SUMMARY OF TOTAL VALUES appearing in Table 13 of Meat Imported into the United Kingdom for the years 1934, 1935, and 1936.

	Values.		
	1934.	1935.	1936.
<b>From—</b>	£	£	£
Irish Free State . . . . .	2,171,498	2,438,879	2,560,573
Australia . . . . .	7,252,780	7,924,890	7,617,195
New Zealand . . . . .	12,970,474	12,892,888	13,187,261
Canada . . . . .	4,764,708	4,770,466	5,955,778
Other British Countries . .	220,699	327,860	232,181
Soviet Union . . . . .	256,458	308,042	280,776
Latvia . . . . .	164,091	125,707	144,638
Lithuania . . . . .	937,682	658,809	815,827
Sweden . . . . .	1,185,126	1,041,174	1,040,637
Denmark . . . . .	18,088,874	16,291,376	15,822,900
Poland . . . . .	2,185,402	1,814,329	1,965,461
Netherlands . . . . .	2,604,079	2,226,112	2,248,551
France . . . . .	56,648	175,218	142,269
Hungary . . . . .	546,657	552,055	462,880
United States of America .	4,521,315	8,359,760	2,741,284
Chile . . . . .	548,911	423,086	522,646
Brazil . . . . .	1,239,575	1,275,179	1,432,280
Uruguay . . . . .	1,887,558	2,129,408	2,098,456
Argentine Republic . . . .	18,409,323	17,569,007	18,803,095
Other Foreign Countries . .	1,511,978	1,354,870	1,809,788
<b>Totals . . . . .</b>	<b>81,518,831</b>	<b>77,759,114</b>	<b>78,829,394</b>

TABLE NO. 15.—QUANTITY AND VALUE OF DEAD MEAT imported into the United Kingdom in the undermentioned Years.

	Quantities.			Values.		
	1934.	1935.	1936.	1934.	1935.	1936.
<b>BEAF:—</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Fresh and salted—						
Total . . .	4,667	2,292	5,382	8,316	3,695	8,686
Chilled and frozen, from—						
Australia . . .	1,377,782	1,332,984	1,351,572	1,758,657	1,833,193	1,775,710
New Zealand . . .	780,549	575,455	506,163	875,108	784,813	664,308
Other British Countries . . .	154,931	143,675	97,502	237,400	204,753	128,487
Brazil . . .	514,576	519,757	512,074	806,328	811,158	815,166
Uruguay . . .	601,947	603,531	580,842	1,001,256	985,470	900,576
Argentine Republic . . .	7,039,347	7,031,074	7,222,780	11,848,792	11,689,412	12,183,751
Other Foreign Countries . . .	..	..	..	..	..	..
Total . . .	10,419,182	10,206,476	10,270,933	16,527,541	16,308,799	16,467,998
Boned, including Cheeks and Skirts, from—						
Australia . . .	193,400	237,215	314,647	262,516	345,688	427,544
New Zealand . . .	214,478	217,617	210,453	257,914	302,853	285,586
Other British Countries . . .	69,711	88,485	86,096	93,110	116,186	114,598
Brazil . . .	18,677	18,343	14,440	24,138	21,815	19,327
Uruguay . . .	10,345	7,736	9,506	15,921	12,582	17,798
Argentine Republic . . .	33,629	20,615	29,224	57,871	42,044	41,410
Other Foreign Countries . . .	..	..	..	..	..	..
Total . . .	540,240	594,010	664,906	709,515	840,918	906,263
Other Descriptions from—						
Australia . . .	54,896	66,132	74,382	128,608	144,710	155,440
New Zealand . . .	19,681	22,257	23,299	44,410	48,797	49,810
Other British Countries . . .	33,148	32,839	33,757	80,104	83,664	84,726
United States of America . . .	78,315	39,750	46,510	217,886	125,149	162,948
Brazil . . .	62,129	58,494	76,894	139,729	136,739	214,919
Uruguay . . .	55,334	37,912	39,533	95,882	93,745	108,097
Argentine Republic . . .	413,645	408,575	424,807	950,991	918,404	1,069,333
Other Foreign Countries . . .	3,638	2,297	1,529	8,008	5,156	3,426
Total . . .	700,776	663,156	732,711	1,665,113	1,556,364	1,849,199
Tinned, canned, &c. Total . . .	90,976	89,676	95,054	839,971	774,520	772,605
Other, including Extracts and Essences Total . . .	922,666	951,087	1,000,103	2,307,166	2,267,146	2,801,075
<b>VEAL—</b>						
Frozen—Total . . .	133,711	179,905	191,625	232,486	317,351	310,394
<b>MUTTON AND LAMB—</b>						
Fresh—Total . . .	12,882	58,347	21,824	45,355	163,952	69,689

TABLE NO. 15.—QUANTITY AND VALUE OF DEAD MEAT—*Continued.*

	Quantities.			Values.		
	1934.	1935.	1936.	1934.	1935.	1936.
<b>MUTTON—Frozen, from—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Australia . . .	461,259	424,050	227,218	845,228	693,878	422,096
New Zealand . . .	898,965	1,041,563	888,864	1,716,799	1,764,720	1,616,778
Other British Countries . . .	..	..	850	..	..	618
Chile . . .	82,258	89,326	95,769	168,574	129,856	177,128
Uruguay . . .	18,690	6,232	8,240	23,260	10,685	13,945
Argentine Republic . . .	187,748	150,423	121,907	261,898	228,070	219,405
Other Foreign Countries . . .	2,595	2,870	2,063	4,744	3,984	3,204
<b>Total . . .</b>	<b>1,596,815</b>	<b>1,714,464</b>	<b>1,344,401</b>	<b>3,015,003</b>	<b>2,816,143</b>	<b>2,453,169</b>
<b>LAMB—Frozen from—</b>						
Australia . . .	1,165,848	1,860,158	1,272,046	3,320,964	3,984,693	3,707,890
New Zealand . . .	2,655,611	2,591,399	2,641,880	8,414,188	8,068,996	8,266,051
Other British Countries . . .	242	18	558	674	51	1,529
Chile . . .	124,067	118,554	111,209	865,116	271,868	316,886
Uruguay . . .	124,702	180,176	117,888	311,958	327,257	316,441
Argentine Republic . . .	788,868	754,827	778,176	2,051,564	1,898,688	2,091,908
Other Foreign Countries . . .	27,641	28,561	87,236	67,008	77,642	101,211
<b>Total . . .</b>	<b>4,881,979</b>	<b>4,988,693</b>	<b>4,958,993</b>	<b>14,531,451</b>	<b>14,574,185</b>	<b>14,800,916</b>
<b>Tinned, Canned, &amp;c.</b>						
<b>Total . . .</b>	<b>47,016</b>	<b>63,899</b>	<b>68,046</b>	<b>145,931</b>	<b>197,720</b>	<b>185,590</b>
<b>Other Descriptions</b>						
<b>Total . . .</b>	<b>158,466</b>	<b>172,746</b>	<b>192,716</b>	<b>391,558</b>	<b>464,988</b>	<b>545,129</b>
<b>PIG PRODUCTS:—</b>						
<b>Bacon, from—</b>						
Irish Free State . . .	367,709	458,419	505,162	1,143,691	1,345,528	1,560,898
Canada . . .	894,284	919,064	1,092,401	3,460,196	3,507,771	4,282,683
Other British Countries . . .	968	649	421	2,841	2,174	1,452
Estonia . . .	50,675	45,621	43,175	190,189	174,566	172,646
Latvia . . .	43,111	82,810	86,866	168,683	126,195	144,588
Lithuania . . .	251,572	165,318	198,538	926,127	623,185	757,254
Sweden . . .	296,641	257,409	241,604	1,167,919	1,018,389	1,019,019
Denmark . . .	4,287,830	3,826,886	3,878,415	17,699,512	15,964,784	14,954,598
Poland . . .	463,869	480,456	408,415	1,719,220	1,612,052	1,628,015
Netherlands . . .	607,704	508,666	484,708	2,434,755	2,068,717	2,061,544
United States of America . . .	89,514	20,011	16,935	138,050	77,483	61,088
Other Foreign Countries . . .	294,795	262,196	173,498	1,006,031	874,423	627,869
<b>Total . . .</b>	<b>7,598,282</b>	<b>6,926,905</b>	<b>6,569,688</b>	<b>30,047,164</b>	<b>27,394,202</b>	<b>27,266,599</b>
<b>Hams, from—</b>						
Irish Free State . . .	18,083	20,207	22,556	44,665	68,813	77,900
Canada . . .	180,717	190,695	277,724	810,685	893,584	1,253,846
Other British Countries . . .	1	3	210	15	21	806
Poland . . .	32,118	21,870	12,402	184,274	97,417	53,904
United States of America . . .	477,508	419,331	382,840	2,044,523	1,909,821	1,500,880
Argentine Republic . . .	20,978	20,159	24,474	78,611	79,285	94,748
Other Foreign Countries . . .	2,873	4,602	1,558	12,085	19,046	8,724
<b>Total . . .</b>	<b>728,273</b>	<b>676,767</b>	<b>671,764</b>	<b>3,125,058</b>	<b>3,067,987</b>	<b>2,989,903</b>
<b>Pork—Fresh</b>						
<b>Total . . .</b>	<b>143,771</b>	<b>142,841</b>	<b>115,978</b>	<b>378,700</b>	<b>342,868</b>	<b>292,135</b>

TABLE No. 15.—QUANTITY AND VALUE OF DEAD MEAT—*Continued.*

	Quantities.			Values		
	1934.	1935.	1936	1934.	1935.	1936.
	Cwt.	Cwt.	Cwt.	£	£	£
<b>Pig Products (contd.)—</b>						
Pork—Chilled or frozen, from—						
Australia . . .	82,425	146,751	232,510	221,044	388,981	622,275
New Zealand . . .	414,276	490,301	579,086	1,109,075	1,279,108	1,500,208
Other British Countries . . .	27,200	7,546	5,190	73,207	24,714	18,518
United States of America . . .	290,365	77,079	10,731	811,115	250,825	48,598
Argentine Republic . . .	277,526	186,842	190,871	682,246	549,784	575,936
Other Foreign Countries . . .	13,629	6,579	7,824	30,176	16,008	19,371
Total . . .	1,105,420	915,098	1,025,212	2,926,863	2,509,815	2,779,906
<b>Tinned, Canned, Tongues, &amp;c Total . . .</b>	892,040	827,109	840,516	1,670,581	1,417,695	1,429,071
<b>RABBITS—Fresh Total . . .</b>	17,216	25,076	73,829	76,531	88,729	152,971
Frozen, from—						
Australia . . .	464,404	206,686	180,840	511,290	222,565	161,646
Other British Countries . . .	41,968	87,490	30,355	55,522	40,512	40,384
Foreign Countries . . .	2,040	1,770	2,640	8,515	6,806	8,849
Total . . .	508,412	245,946	163,835	575,327	269,883	210,879
<b>ALL OTHER KINDS OF MEAT—</b>						
Tinned, Canned, &c Total . . .	176,951	171,894	205,683	590,658	612,659	751,910
<b>POULTRY—Dead from—</b>						
Irish Free State . . .	138,530	105,050	104,219	464,923	418,934	414,782
Other British Countries . . .	18,402	27,949	26,323	87,063	145,520	142,480
Soviet Union (Russia) . . .	9,618	13,974	17,544	41,247	71,293	54,785
Netherlands . . .	10,061	7,223	7,704	45,139	31,287	35,300
Austria . . .	4,128	3,692	1,657	16,283	15,532	6,177
Hungary . . .	128,029	119,310	105,371	455,119	457,046	398,526
Yugoslavia . . .	56,489	72,820	66,953	177,770	269,737	243,812
Other Foreign Countries . . .	86,936	72,317	92,446	325,812	280,400	366,638
Total . . .	452,199	422,535	422,117	1,613,376	1,689,749	1,656,900
<b>GAME—Dead Total . . .</b>	27,130	20,562	30,478	95,167	80,286	130,457
<b>TOTAL of all Meat</b>	30,654,044	29,549,454	29,173,744	81,518,831	77,759,114	78,829,394



TABLE NO. 16.—QUANTITIES AND VALUES OF BUTTER, MARGARINE, CHEESE, MILK PRODUCTS, AND EGGS imported into the United Kingdom in each Year from 1934 to 1936 inclusive.

[From Trade and Navigation Returns.]

	Quantities.			Values		
	1934	1935.	1936.	1934.	1935.	1936.
<b>BUTTER from—</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Irish Free State	468,381	488,467	468,272	1,158,190	1,505,165	1,694,839
Union of South Africa	21,423	82,349	75,498	71,488	343,822	322,218
Australia	2,103,366	2,113,408	1,694,222	7,247,039	8,388,095	7,673,015
New Zealand	2,676,794	2,637,502	2,791,914	9,826,193	11,571,543	13,445,227
Other British Countries	13,826	113,427	107,119	47,167	546,091	503,886
Soviet Union	491,470	503,192	415,055	1,093,231	1,669,537	1,648,040
Finland	150,849	115,707	159,761	495,905	485,898	713,079
Estonia	122,919	119,343	116,329	350,340	424,491	492,855
Latvia	155,756	192,336	196,896	420,785	696,687	827,358
Lithuania	141,101	180,667	210,342	403,017	634,236	883,801
Sweden	302,296	184,285	149,443	927,682	750,809	687,759
Denmark	2,485,810	2,186,350	2,170,542	9,557,089	9,965,750	10,770,929
Poland	50,163	99,158	188,954	140,226	341,264	710,768
Netherlands	301,137	463,811	746,101	964,215	1,548,655	3,011,217
Argentine Republic	111,546	68,964	142,528	304,141	227,636	559,006
Other Foreign Countries	98,557	59,050	119,067	265,098	228,449	480,687
<b>Total</b>	<b>9,695,394</b>	<b>9,608,016</b>	<b>9,752,043</b>	<b>33,271,706</b>	<b>39,328,128</b>	<b>44,424,184</b>
<b>MARGARINE—</b>	<b>Cwt</b>	<b>Cwt</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
<b>Total</b>	<b>19,598</b>	<b>17,741</b>	<b>43,220</b>	<b>30,825</b>	<b>27,983</b>	<b>66,925</b>
<b>CHEESE from—</b>	<b>Cwt</b>	<b>Cwt</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
Australia	114,473	134,249	91,008	250,072	303,768	239,154
New Zealand	2,092,044	1,762,915	1,681,147	4,677,375	4,198,564	4,773,989
Canada	520,223	470,533	602,541	1,290,331	1,236,560	1,926,353
Other British Countries	7,873	30,456	30,694	17,965	72,381	84,487
Netherlands	127,679	199,217	181,542	268,391	301,756	325,869
Switzerland	14,154	14,707	17,049	97,591	100,514	115,116
Italy	93,688	79,893	14,005	329,724	336,902	60,633
Other Foreign Countries	18,405	22,381	58,508	83,068	98,648	264,490
<b>Total</b>	<b>2,988,539</b>	<b>2,714,351</b>	<b>2,676,489</b>	<b>7,014,517</b>	<b>6,649,09</b>	<b>7,789,591</b>
<b>CREAM—</b>	<b>Cwt</b>	<b>Cwt.</b>	<b>Cwt</b>	<b>£</b>	<b>£</b>	<b>£</b>
<b>Total</b>	<b>85,398</b>	<b>74,670</b>	<b>76,642</b>	<b>248,042</b>	<b>229,485</b>	<b>254,787</b>
<b>MILK—Con-</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>Cwt.</b>	<b>£</b>	<b>£</b>	<b>£</b>
<b>densed—</b>						
Unsweetened						
<b>Total</b>	<b>342,001</b>	<b>293,978</b>	<b>282,108</b>	<b>626,643</b>	<b>519,980</b>	<b>364,115</b>
Sweetened—						
Whole—						
<b>Total</b>	<b>122,564</b>	<b>87,709</b>	<b>89,347</b>	<b>196,578</b>	<b>145,517</b>	<b>143,254</b>

TABLE 16.—QUANTITIES AND VALUES OF BUTTER, &c.—*Continued.*

	Quantities.			Values.		
	1934.	1935.	1936.	1934.	1935.	1936.
<b>MILK—separated or skimmed—</b>	Cwt.	Cwt.	Cwt.	£	£	£
<b>Total .</b>	1,628,200	1,404,697	1,363,344	1,985,136	1,380,041	1,464,296
<b>MILK POWDER—unsweetened—</b>	Cwt.	Cwt.	Cwt.	£	£	£
<b>Total .</b>	251,913	219,144	242,009	461,561	390,284	430,612
<b>EGGS IN SHELL from—</b>	Great Hundreds.	Great Hundreds.	Great Hundreds.	£	£	£
Irish Free State	3,194,394	2,394,980	2,563,216	894,642	711,177	796,726
Union of South Africa . .	300,262	360,901	371,705	177,663	213,066	209,824
Australia . .	2,098,943	1,921,122	1,634,919	1,185,697	1,091,655	948,376
Other British Countries . .	209,831	139,013	142,131	110,640	77,634	78,792
Finland . .	889,461	641,517	379,552	307,040	252,157	185,628
Sweden . .	257,805	272,592	186,409	109,343	105,063	81,440
Denmark . .	6,383,211	6,564,046	7,987,350	2,435,591	2,688,777	3,513,431
Poland . .	1,941,836	2,014,888	2,563,731	531,907	570,880	710,279
Netherlands .	944,166	2,677,980	3,799,534	381,340	1,001,613	1,545,350
Belgium . .	49,021	256,101	539,927	24,543	120,793	228,734
China . .	1,415,019	1,219,887	1,356,888	539,577	468,029	518,802
Other Foreign Countries . .	1,050,260	1,303,784	3,127,860	353,023	467,645	1,084,235
<b>Total .</b>	18,734,209	19,766,811	24,653,222	7,051,006	7,768,489	9,901,617
<b>EGGS NOT IN SHELL—</b>	Cwt.	Cwt.	Cwt.	£	£	£
Liquid or frozen from—						
British Countries . .	954	1,736	7,044	2,585	4,881	20,792
China . .	800,350	768,590	862,021	1,654,433	1,612,984	2,079,451
Other Foreign Countries . .	16,605	17,089	20,932	40,651	43,890	55,566
<b>Total .</b>	817,909	787,415	889,997	1,697,669	1,661,755	2,155,809
<b>EGGS—other sorts</b>	Cwt.	Cwt.	Cwt.	£	£	£
<b>Total .</b>	22,388	27,565	34,417	248,921	272,947	331,109
<b>OTHER KINDS OF DAIRY PRODUCE—</b>				£	£	£
<b>Total .</b>	.	..	...	50,05	45,527	35,867
<b>Total Value of Dairy Produce</b>	..	...	...	52,882,659	58,419,229	67,367,16

TABLE No. 17.—OTHER ARTICLES AFFECTING AGRICULTURE.

	Quantities			Values.		
	1934.	1935.	1936.	1934.	1935.	1936.
<b>FRUIT, VEGETABLES, &amp;c.:</b>	Cwt.	Cwt.	Cwt.	£	£	£
Apples . . . . .	5,892,163	7,241,320	5,641,507	5,607,584	6,960,262	5,643,620
Peaches and Nectarines . . . . .	92,518	106,855	71,558	228,848	224,475	181,256
Plums, Greengages, Damsons } . . . . .	254,824	421,796	280,758	521,959	796,544	485,782
Pears . . . . .	1,008,022	1,272,775	1,156,610	1,400,242	1,678,300	1,504,240
Grapes . . . . .	1,056,545	933,585	707,797	1,480,151	1,564,025	1,491,313
Oranges . . . . .	10,404,381	10,806,307	9,532,315	7,450,182	7,967,623	7,320,895
Lemons, Limes, &c. . . . .	1,533,854	1,839,900	994,819	907,880	1,174,516	1,092,687
Bananas . . . . .	17,053,414	20,063,867	20,678,258	4,564,252	4,779,513	4,568,900
Grape-Fruit . . . . .	965,861	1,177,616	1,140,989	1,157,415	1,331,502	1,077,521
Apricots . . . . .	75,759	63,024	105,479	109,455	109,591	186,339
Nuts used as Fruit . . . . .	861,621	919,664	811,378	2,166,518	2,502,099	2,741,018
Fruit (unenumerated) . . . . .	1,067,295	1,088,244	962,539	911,178	1,060,563	1,061,774
Onions . . . . .	10,248,977	10,464,475	10,480,628	1,265,827	1,317,597	1,409,210
Potatoes . . . . .	3,077,047	3,816,087	6,328,305	2,091,052	2,778,983	3,098,798
Tomatoes . . . . .	2,732,507	2,975,244	2,830,416	4,891,766	3,999,922	3,941,368
Vegetables, unenumerated (raw) } . . . . .	762,266	644,273	1,262,520	919,777	882,560	1,871,201
Total value . . . . .	..	..	..	85,174,031	99,123,580	87,071,417
<b>OTHER ARTICLES:</b>	Cwt.	Cwt.	Cwt.	£	£	£
Lard . . . . .	2,809,012	1,531,111	1,519,604	3,856,377	4,390,790	3,936,954
Wool—sheep and lambs' . . . . .	Thous lbs. 788,582	Thous lbs. 861,061	Thous lbs. 914,173	37,086,099	35,582,513	43,929,419
Wood and timber—	Loads.	Loads.	Fathoms.			
Pit-props or pit wood . . . . .	2,237,171	2,324,162	826,909	3,180,374	3,528,927	3,509,151
Sawn soft . . . . .	Standards. 6,297,464	Standards. 5,567,585	Standards. 2,020,046	21,716,397	17,380,305	22,561,165
Staves . . . . .	Tons. 62,793	Tons. 60,910	Tons. 62,419	338,529	339,636	491,185
Feeding-stuffs for animals . . . . .	1,663,168	1,611,120	1,729,335	7,429,216	7,712,089	8,433,025
<b>Seeds—</b>	Cwt.	Cwt.	Cwt.			
Clover and grass . . . . .	210,066	227,879	206,005	514,127	474,642	507,028
Cotton . . . . .	Tons. 542,997	Tons. 658,673	Tons. 602,115	2,387,917	3,717,149	3,659,125
Flax or linseed . . . . .	184,028	256,909	272,761	2,018,908	2,488,066	3,377,515
Rape . . . . .	20,481	30,387	22,907	187,908	278,712	254,764
Soya beans . . . . .	177,084	158,934	82,151	1,004,706	1,048,176	638,358
Superphosphates . . . . .	50,290	80,466	29,050	106,756	60,222	55,684
Phosphates of lime . . . . .	423,043	382,875	427,403	575,855	537,405	637,535
Nitrate-sodium . . . . .	Cwt. 321,990	Cwt. 716,848	Cwt. 807,840	66,905	154,508	177,033
Nitrate-potassium . . . . .	122,221	187,764	252,092	74,316	101,070	112,617
Cotton, raw of 100 lb . . . . .	Centals. 12,635,925	Centals. 12,730,523	Centals. 15,472,215	84,902,043	85,983,943	44,262,525
Hemp . . . . .	Tons. 90,623	Tons. 95,010	Tons. 96,380	1,783,748	1,865,902	2,483,069
Flax . . . . .	61,650	56,177	65,357	3,147,557	4,120,902	4,458,061
<b>Hides untanned—</b>	Cwt.	Cwt.	Cwt.			
Dry . . . . .	527,386	546,161	689,481	1,413,113	1,397,732	2,085,358
Wet . . . . .	867,842	1,140,767	1,196,797	1,992,649	2,759,987	3,249,221
Petroleum (refined) . . . . .	Thousand Gallons. 2,270,499	Thousand Gallons. 2,306,322	Thousand Gallons. 2,415,863	27,799,015	29,424,000	32,969,916
Petroleum (crude) . . . . .	476,006	488,516	511,865	4,002,270	4,138,687	4,201,731

TABLE No. 18.—NUMBER AND VALUE OF LIVE CATTLE, SHEEP, PIGS, AND OTHER ANIMALS FOR FOOD imported into the United Kingdom in the undermentioned Years. [*From Trade and Navigation Returns.*]

	Number.			Value.		
	1934.	1935.	1936.	1934.	1935.	1936.
CATTLE, from—	No.	No.	No.	£	£	£
Irish Free State . . .	458,164	592,644	657,301	3,559,484	4,529,150	5,429,874
Canada . . .	51,873	6,478	87,759	848,691	105,151	637,874
Other countries . . .	..	..	..	..	..	..
Total . . .	509,537	599,122	695,060	4,408,155	4,634,301	6,058,748
SHEEP AND LAMBS, from—						
Irish Free State . . .	362,989	278,969	455,583	486,598	356,812	648,684
Pigs, from—						
Irish Free State . . .	133,913	127,989	120,721	384,774	473,506	413,169
ALL OTHER ANIMALS . . .	567,551	707,342	929,670	40,579	104,887	125,806
Total Value . . .	..	..	..	5,265,106	5,569,506	7,241,407

TABLE No. 19.—NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS imported into Great Britain from Ireland in each of the Years 1930-1936.

	1930.	1931.	1932.	1933.	1934.	1935.	1936.
† HORSES :—							
Stallions . . .	467	407	367	333	412	375	433
Mares . . .	4,087	3,862	3,699	3,905	4,942	4,886	4,310
Geldings . . .	4,528	4,101	4,029	5,033	6,830	6,744	6,190
Total . . .	9,032	8,370	8,095	9,271	12,184	12,005	10,933
CATTLE, Oxen, Bulls, and Cows :—							
Fat . . .	301,128	268,677	223,901	238,086	165,006	219,207	208,813
Store . . .	511,249	431,859	404,169	368,714	390,823	531,816	572,560
Other cattle . . .	81,609	67,806	55,633	44,733	62,664	71,437	70,710
Calves . . .	72,155	65,298	61,201	58,352	33,963	32,204	24,755
Total . . .	966,141	833,440	744,904	709,334	652,456	854,164	876,838
SHEEP :—							
Sheep . . .	260,711	316,847	227,975	169,937	165,257	194,996	256,834
Lambs . . .	389,446	355,448	350,588	282,964	328,859	275,071	371,062
Total . . .	650,157	672,295	578,563	452,901	494,116	470,067	627,896
PIGS :—							
Fat . . .	355,166	424,067	241,458	119,691	150,634	205,026	156,994
Store . . .	3,567	5,893	3,580	3,123	3,795	2,564	1,412
Total . . .	358,733	429,960	245,038	122,814	154,429	207,590	158,406

† Not including Army Horses.

TABLE No. 20.—RETURN OF THE AVERAGE PRICE OF WOOL in the Years 1935 and 1936.

Years.	Australian.	South African.	English Fleeces.
	Per lb.	Per lb.	Per lb.
	s. d.	s. d.	s. d.
1935 . . .	0 11½	0 9½	0 9½ to 1 2½
1936 . . .	1 1½	0 11	0 8½ „ 1 4½

## EDINBURGH CORN MARKET.

STATEMENT SHOWING THE PRICES OF WHEAT, BARLEY, AND OATS FOR THE YEAR 1936.

The offering of grain by farmers and others in the area of the Market was not resumed during the year. It is hoped that advantage will be taken of the privilege afforded to farmers and merchants of offering grain in the open market, as undoubtedly it enables them to secure the market value, and gives a desirable indication of the true value of the various grains.

The Corn Sales Act of 1921 provides that all sales are to be effected by weight only, and expressed in terms of or by reference to the hundredweight of 112 lb. Experience has proved it to be convenient to quote at a price per  $4\frac{1}{2}$  cwt. for Wheat, 4 cwt. for Barley, and 3 cwt. for Oats.

The following statement gives a record of the year's proceedings in Edinburgh Corn Market.

1936.	WHEAT, per $4\frac{1}{2}$ cwt.		BARLEY, per 4 cwt.		OATS, per 3 cwt.	
	Highest.	Lowest	Highest.	Lowest	Highest	Lowest.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January	8 26 0		38 0	25 0	17 0	15 3
"	15 27 0	26 0	38 0	24 0	17 0	15 3
"	22 26 9	26 3	38 0	24 0	16 6	15 0
"	29 26 6		32 0	24 0	16 6	15 0
February	5 26 0	25 6	32 0	24 0	16 3	14 9
"	12 25 0	24 6	32 0	24 0	15 6	14 0
"	19 25 0	24 0	32 0	24 0	15 6	14 0
"	26 25 0	24 6	32 0	24 0	16 0	14 6
March	4 26 6	26 0	32 0	24 0	16 0	15 0
"	11 27 0	26 6	32 0	24 0	16 9	15 3
"	18 28 0	27 6	30 0	25 0	17 0	15 9
"	25 28 6	29 0	30 0	25 0	17 0	15 6
April	1 28 9	28 6	30 0	25 0	17 0	15 0
"	8 28 9	28 6	30 0	24 0	17 0	15 0
"	15 29 0	28 6	32 0	24 0	16 6	15 0
"	22 29 3	28 9	34 0	26 0	16 6	15 0
"	29 29 6	29 0	34 0	26 0	16 6	15 0
May	6 30 0	29 6	36 0	25 0	16 9	15 6
"	13 31 0	30 6	34 0	26 0	16 6	15 0
"	20 30 6	30 0	..	..	16 6	15 3
"	27 29 0	28 6	..	..	16 9	15 6
June	3 28 6	28 3	..	..	16 6	15 3
"	10 28 9	28 3	..	..	16 6	15 3
"	17 29 0	28 6	..	..	16 6	15 3
"	24 30 0	29 6	..	..	16 6	15 3
July	1 30 6	30 0	..	..	16 6	15 3
"	8 32 6	31 6	..	..	17 0	16 0
"	15 32 6	32 0	..	..	17 6	16 0
"	22 32 6	32 0	..	..	18 0	16 6
"	29 34 0	..	..	..	19 6	17 6
August	5 37 0	36 0	..	..	22 0	20 0
"	12 37 6	36 6	..	..	21 9	20 6
"	19 37 6	36 6	..	..	21 6	20 0
"	26 37 0	36 0	..	..	20 0	19 0
September	2 36 6	35 6	..	..	19 6	18 6
"	9 36 6	35 6	40 0	28 0	20 6	19 6
"	16 38 0	37 0	45 0	35 0	22 6	22 0
"	23 40 0	39 0	45 0	29 0	22 6	21 0
"	30 42 0	38 0	45 0	28 0	23 0	18 6
October	7 42 0	36 0	45 0	28 0	21 6	18 6
"	14 43 6	38 0	45 0	30 0	21 6	18 6
"	21 43 6	37 0	46 0	30 0	21 3	18 6
"	28 39 6	38 6	47 0	32 0	21 6	19 6
November	4 39 0	38 0	45 0	30 0	21 3	19 6
"	11 38 6	37 6	45 0	30 0	21 0	18 6
"	18 38 0	37 0	46 0	32 0	21 0	18 6
"	25 38 0	37 6	45 0	30 0	21 3	19 6
December	2 39 0	38 6	46 0	30 0	22 0	19 6
"	9 42 0	40 0	46 0	32 0	23 0	20 6
"	16 44 0	43 0	48 0	34 0	24 0	22 0
"	23 45 6	44 6	50 0	34 0	25 6	23 0
"	30 46 0	45 0	50 0	36 0	25 6	23 6

## PRICES OF SHEEP SINCE 1818.

TABLE No. 1.—CHEVIOT SHEEP.

Year.	Wethers.		Ewes.		Lambs.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1818	28 0	to 30 0	not quoted.		8 0	to 10 0
1819	25 0	" 27 0	15 0	to 17 0	10 6	" 12 0
1820	20 0	" 25 0	16 0	" 17 0	10 0	" 11 0
1821	18 0	" 20 0	14 0	" 16 0	7 6	" 8 0
1822	12 6	" 13 0	8 0	" 8 6	4 6	" 0 0
1823	13 6	" 18 0	7 0	" 10 6	5 6	" 6 0
1824	14 0	" 19 0	7 0	" 9 0	4 6	" 6 0
1825	29 0	" 32 0	15 0	" 19 0	9 0	" 10 6
1826	17 6	" 21 6	18 0	" 15 0	7 0	" 7 6
1827	15 0	" 24 0	not quoted.		7 0	" 8 0
1828	18 0	" 27 6	12 0	to 15 0	7 0	" 8 2
1829	18 0	" 24 0	12 6	" 14 0	7 0	" 8 6
1830	15 0	" 21 0	8 0	" 11 0	6 0	" 6 9
1831	18 0	" 25 0	9 0	" 13 0	7 0	" 8 0
1832	19 0	" 24 0	11 0	" 16 0	7 0	" 9 0
1833	22 0	" 31 0	13 6	" 20 0	8 0	" 11 2
1834	22 0	" 31 0	13 6	" 21 0	9 0	" 11 6
1835	22 0	" 27 6	18 0	" 20 6	8 0	" 11 0
1836	24 0	" 31 6	16 0	" 19 0	10 0	" 14 0
1837	19 0	" 28 0	14 0	" 19 0	10 0	" 13 0
1838	23 0	" 30 6	17 0	" 22 0	12 0	" 14 0
1839	23 0	" 31 0	14 0	" 19 0	0 0	" 18 0
1840	24 0	" 33 0	15 0	" 23 0	7 0	" 11 6
1841	23 0	" 30 6	14 0	" 22 0	8 0	" 12 0
1842	22 6	" 28 0	13 0	" 17 0	7 6	" 10 0
1843	19 0	" 25 0	8 0	" 12 0	5 0	" 8 0
1844	21 0	" 29 0	10 0	" 16 0	8 0	" 10 6
1845	23 0	" 33 0	13 0	" 20 0	8 0	" 13 0
1846	24 0	" 33 6	14 6	" 21 6	10 0	" 14 6
1847	24 0	" 35 0	13 0	" 24 0	11 6	" 15 0
1848	23 0	" 34 6	13 0	" 28 0	11 6	" 15 0
1849	21 0	" 30 2	12 0	" 21 0	0 0	" 14 0
1850	20 6	" 29 6	12 0	" 20 0	8 0	" 13 0
1851	21 6	" 31 0	13 0	" 21 0	8 2	" 14 0
1852	21 0	" 32 0	15 0	" 23 0	8 0	" 14 0
1853	26 6	" 38 0	17 0	" 28 6	9 0	" 17 0
1854	25 0	" 36 0	17 0	" 26 0	9 0	" 16 6
1855	23 6	" 36 0	16 0	" 25 0	10 0	" 17 0
1856	22 0	" 35 6	15 6	" 24 0	10 0	" 15 0
1857	24 0	" 36 0	14 6	" 26 0	10 6	" 14 6
1858	24 0	" 34 6	14 0	" 24 6	10 6	" 14 0
1859	25 0	" 34 6	16 0	" 25 0	10 3	" 14 9
1860	26 0	" 38 0	17 6	" 27 6	12 6	" 17 6
1861	25 0	" 38 6	16 0	" 28 0	9 0	" 16 0
1862	27 0	" 37 6	17 6	" 28 0	10 0	" 16 0
1863	25 0	" 38 6	19 0	" 28 6	10 6	" 16 0
1864	31 0	" 41 0	21 0	" 31 6	14 0	" 18 0
1865	32 6	" 44 0	22 6	" 33 6	14 6	" 20 0
1866	37 0	" 50 0	29 0	" 42 6	15 0	" 26 0
1867	26 0	" 58 0	18 0	" 25 6	12 0	" 16 0
1868	30 0	" 32 0	15 6	" 21 0	7 6	" 13 0
1869	28 0	" 38 0	15 0	" 22 6	7 6	" 14 0
1870	35 6	" 43 0	18 0	" 28 0	10 0	" 17 0
1871	36 6	" 49 0	22 0	" 33 6	14 0	" 20 0
1872	45 0	" 56 0	32 0	" 42 0	16 0	" 22 0
1873	42 0	" 51 0	35 0	" 42 0	15 6	" 22 0
1874	33 6	" 44 6	21 0	" 36 0	12 0	" 17 0

TABLE No. 1.—CHEVIOT SHEEP—*Continued.*

Year.	Wethers.		Ewes.		Lambs.	
	s.	d.	s.	d.	s.	d.
1875	33	0 to 48	21	0 to 34	18	6 to 23
1876	40	0 " 52	28	0 " 30	18	6 " 25
1877	41	0 " 51	25	0 " 37	15	0 " 24
1878	35	6 " 48	23	6 " 35	14	0 " 22
1879	34	0 " 44	21	0 " 34	14	0 " 20
1880	30	0 " 43	20	0 " 30	12	6 " 20
1881	32	0 " 45	29	0 " 34	14	0 " 20
1882	40	0 " 51	30	0 " 40	14	0 " 20
1883	44	0 " 55	34	6 " 46	15	6 " 23
1884	36	0 " 47	29	6 " 41	12	6 " 20
1885	30	0 " 38	24	0 " 31	12	0 " 18
1886	32	0 " 40	21	0 " 29	12	6 " 19
1887	29	0 " 36	18	0 " 26	11	0 " 16
1888	30	0 " 38	19	0 " 27	12	0 " 17
1889	36	0 " 44	24	0 " 32	14	0 " 22
1890	31	0 " 40	22	0 " 30	12	6 " 20
1891	27	0 " 38	16	0 " 25	9	0 " 16
1892	22	0 " 30	13	0 " 22	5	0 " 11
1893	26	0 " 35	18	0 " 28	8	6 " 15
1894	26	0 " 37	20	0 " 31	10	6 " 18
1895	28	0 " 39	22	0 " 34	11	6 " 19
1896	24	6 " 34	19	0 " 30	9	0 " 16
1897	27	0 " 36	21	0 " 31	11	0 " 17
1898	27	0 " 37	22	0 " 32	12	0 " 18
1899	24	0 " 33	20	0 " 30	10	6 " 16
1900	26	0 " 36	22	0 " 32	12	0 " 17
1901	25	0 " 32	20	0 " 29	11	0 " 16
1902	24	0 " 31	18	0 " 27	9	6 " 14
1903	26	0 " 34	21	0 " 31	11	4 " 18
1904	28	6 " 36	23	0 " 32	13	0 " 20
1905	27	6 " 35	23	0 " 33	14	0 " 21
1906	30	0 " 38	26	0 " 34	15	0 " 23
1907	28	0 " 34	22	0 " 30	13	6 " 19
1908	26	0 " 33	21	0 " 27	11	6 " 17
1909	24	0 " 31	18	0 " 25	9	6 " 16
1910	27	0 " 35	22	0 " 31	12	0 " 20
1911	24	0 " 31	18	6 " 27	10	6 " 18
1912	26	0 " 34	22	0 " 31	13	0 " 21
1913	30	0 " 39	24	0 " 35	16	0 " 24
1914	32	6 " 41	28	0 " 39	18	0 " 27
1915	36	0 " 46	31	0 " 44	20	0 " 30
1916	40	6 " 51	34	0 " 49	22	0 " 34
1917	43	6 " 56	38	0 " 56	24	0 " 34
1918	50	0 " 66	42	0 " 61	25	0 " 37
1919	53	0 " 69	44	6 " 67	28	0 " 40
1920	56	0 " 91	48	0 " 79	34	0 " 49
1921	45	0 " 60	52	3 " 85	33	9 " 52
1922	40	0 " 56	56	0 " 90	27	0 " 50
1923	44	0 " 65	61	0 " 106	30	0 " 62

Year.	Wethers.		Ewes.		Lambs.	
	s.	d.	s.	d.	s.	d.
1924	41	0 to 81	60	0 to 100	31	6 to 58
1925	39	3 " 50	56	0 " 88	22	3 " 50
1926	35	0 " 49	34	6 " 64	26	3 " 42
1927	28	9 " 46	32	6 " 55	23	3 " 39
1928	28	3 " 48	30	6 " 55	22	9 " 47
1929	33	6 " 54	34	6 " 62	25	6 " 47
1930	36	0 " 54	35	0 " 74	24	0 " 47
1931	24	0 " 45	23	0 " 50	17	0 " 37
1932	16	0 " 26	18	0 " 36	10	6 " 24
1933	16	0 " 28	25	3 " 40	16	6 " 31
1934	16	0 " 34	22	6 " 44	19	8 " 33
1935	22	0 " 37	24	0 " 44	16	0 " 33
1936	24	6 " 50	28	0 " 55	18	6 " 37

TABLE NO. 2.—BLACKFACE SHEEP.

Year.	Wethers.		Ewes.		Lambs.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1819	22 0	to 24 0	12 0	to 15 0	8 0	to 9 0
1820	20 0	" 22 8	15 6	" 17 0	7 0	" 8 6
1821	18 0	" 20 0	12 0	" 18 0	6 0	" 7 0
1822	11 6	" 18 6	5 6	" 6 0	4 6	" 0 0
1823	12 0	" 16 0	5 0	" 6 6	4 0	" 5 3
1824	9 6	" 18 6	6 9	" 7 0	4 0	" 5 0
1825	22 0	" 20 0	11 0	" 18 6	6 0	" 9 0
1826	15 0	" 17 9	8 9	" 9 6	4 6	" 6 0
1827	14 0	" 18 6	7 0	" 10 9	6 0	" 7 6
1828	15 0	" 20 0	8 0	" 11 0	5 9	" 7 6
1829	14 0	" 18 0	4 0	" 10 0	6 0	" 7 0
1830	9 6	" 18 0	4 0	" 6 0	4 6	" 6 0
1831	18 0	" 17 0	5 0	" 7 6	5 0	" 8 6
1832	14 0	" 18 0	7 0	" 11 6	6 0	" 7 8
1833	16 0	" 24 0	7 6	" 12 0	6 6	" 9 9
1834	16 0	" 22 0	10 0	" 13 0	6 0	" 8 6
1835	15 0	" 18 9	10 0	" 18 0	7 0	" 8 0
1836	15 0	" 21 0	9 0	" 12 0	8 6	" 11 0
1837	13 0	" 16 0	8 0	" 12 0	8 0	" 9 6
1838	15 0	" 20 6	10 0	" 18 0	not quoted.	
1839	15 0	" 22 0	10 0	" 12 0	7 0	to 8 3
1840	15 0	" 22 6	11 0	" 12 0	7 0	" 9 3
1841	16 0	" 20 0	9 0	" 11 0	6 0	" 8 0
1842	14 0	" 19 0	7 6	" 8 9	5 6	" 7 0
1843	not quoted.		4 9	" 6 6	not quoted.	
1844	15 0	to 21 0	6 6	" 10 0	5 0	to 8 0
1845	14 0	" 28 0	8 0	" 12 0	6 0	" 8 0
1846	13 0	" 24 0	10 0	" 13 0	8 0	" 9 0
1847	20 6	" 25 0	10 0	" 14 0	8 6	" 9 6
1848	20 0	" 24 0	11 3	" 12 0	8 6	" 10 0
1849	not quoted.		not quoted.		7 0	" 7 6
1850					7 0	" 0 6
1851	17 6	to 22 0	9 0	to 12 0	6 6	" 8 0
1852	18 6	" 22 0	9 6	" 12 0	4 6	" 7 9
1853	23 0	" 27 0	14 6	" 16 6	8 0	" 11 6
1854	20 0	" 26 9	11 0	" 16 6	8 0	" 10 6
1855	23 6	" 28 6	14 0	" 16 0	10 0	" 11 0
1856	17 0	" 24 9	10 0	" 20 0	7 6	" 10 0
1857	20 0	" 29 0	10 6	" 15 0	9 8	" 11 0
1858	20 0	" 27 6	9 9	" 18 9	8 8	" 10 6
1859	20 0	" 25 0	10 0	" 14 0	8 9	" 11 0
1860	21 0	" 27 8	11 0	" 16 0	10 0	" 13 6
1861	21 0	" 29 0	12 0	" 22 0	6 8	" 14 0
1862	18 9	" 27 0	12 0	" 18 8	6 0	" 12 0
1863	20 0	" 30 6	13 0	" 16 0	8 0	" 11 6
1864	25 0	" 30 0	15 0	" 19 0	10 0	" 13 6
1865	15 6	" 32 6	15 0	" 25 0	10 0	" 17 0
1866	31 6	" 40 0	20 0	" 36 0	18 6	" 22 6
1867	20 0	" 30 6	14 0	" 22 6	7 6	" 13 6
1868	20 0	" 26 0	10 6	" 18 6	7 0	" 18 0
1869	22 0	" 28 0	11 0	" 14 0	6 9	" 9 0
1870	27 0	" 32 6	18 0	" 22 0	8 0	" 14 6
1871	23 0	" 37 0	13 0	" 23 0	11 0	" 16 8
1872	31 6	" 45 0	18 0	" 32 0	12 6	" 18 0
1873	28 0	" 39 0	16 6	" 27 0	7 0	" 16 0
1874	25 0	" 35 0	13 0	" 30 0	7 0	" 14 0
1875	26 6	" 37 6	15 0	" 21 8	9 6	" 17 6
1876	30 0	" 40 0	19 0	" 24 0	13 0	" 20 6
1877	35 0	" 38 9	18 0	" 25 0	13 6	" 22 6
1878	30 9	" 36 0	17 0	" 23 0	12 0	" 23 0
1879	25 0	" 35 9	16 0	" 24 0	10 6	" 20 0
1880	25 9	" 38 6	16 6	" 22 6	19 0	" 17 0
1881	30 0	" 39 0	15 9	" 23 0	19 0	" 15 0
1882	33 0	" 46 0	20 0	" 28 0	12 6	" 18 6
1883	36 0	" 50 6	24 6	" 33 0	14 0	" 21 6
1884	39 0	" 43 6	19 6	" 28 0	12 0	" 19 6
1885	24 0	" 34 0	18 0	" 22 6	10 0	" 15 0
1886	25 0	" 34 0	12 0	" 22 0	10 6	" 16 0
1887	22 0	" 30 0	11 0	" 19 0	8 0	" 13 0
1888	22 0	" 32 0	12 0	" 24 0	10 0	" 16 0
1889	26 0	" 40 0	18 0	" 29 0	13 0	" 22 0



TABLE NO. 2.—BLACKFACE SHEEP—*Continued.*

Year.	Wethers.				Ewes.				Lambs.						
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.			
1890	24	0	to	37	0	14	0	to	27	0	10	6	to	19	0
1891	21	0	"	37	0	10	0	"	24	0	7	6	"	15	0
1892	16	0	"	28	6	6	0	"	17	0	8	0	"	10	0
1893	21	0	"	37	0	12	0	"	24	0	7	0	"	14	0
1894	20	0	"	37	0	14	6	"	26	6	8	6	"	16	6
1895	23	0	"	41	0	16	0	"	28	6	9	0	"	17	0
1896	19	0	"	35	4	13	0	"	24	0	6	0	"	13	6
1897	21	0	"	36	6	15	0	"	25	6	7	0	"	14	6
1898	22	0	"	37	0	16	0	"	26	6	8	0	"	15	0
1899	20	0	"	33	6	13	0	"	24	0	5	6	"	13	0
1900	23	0	"	36	0	16	0	"	26	6	8	0	"	15	6
1901	20	0	"	35	0	14	0	"	25	6	6	6	"	14	6
1902	18	6	"	34	0	12	0	"	24	0	6	0	"	14	0
1903	21	0	"	36	0	15	0	"	28	0	7	0	"	16	6
1904	23	0	"	38	6	18	0	"	30	0	8	6	"	17	6
1905	21	6	"	37	0	19	0	"	31	0	9	0	"	18	6
1906	28	0	"	38	0	20	0	"	33	0	10	0	"	19	6
1907	21	0	"	33	6	17	0	"	28	0	8	6	"	17	6
1908	19	6	"	30	0	15	0	"	24	6	8	0	"	16	0
1909	17	0	"	28	0	11	6	"	22	0	6	3	"	13	0
1910	21	0	"	32	6	16	0	"	27	6	8	0	"	17	0
1911	19	0	"	29	6	14	0	"	24	0	7	0	"	15	0
1912	21	6	"	32	6	17	0	"	27	6	9	6	"	17	6
1913	24	6	"	36	0	21	0	"	31	0	12	6	"	21	6
1914	27	0	"	38	6	25	0	"	34	6	15	6	"	24	0
1915	31	0	"	42	6	29	0	"	39	6	17	0	"	25	6
1916	33	0	"	46	6	31	0	"	42	0	19	0	"	27	6
1917	36	0	"	51	0	33	0	"	47	0	21	0	"	30	0
1918	41	0	"	56	0	36	0	"	50	6	27	0	"	33	0
1919	44	0	"	62	6	39	0	"	54	0	29	0	"	36	0
1920	46	0	"	66	0	44	0	"	62	0	31	0	"	43	0
1921	32	9	"	60	9	35	3	"	62	6	20	3	"	47	0
1922	40	3	"	63	0	40	6	"	74	0	18	0	"	44	0
1923	46	0	"	66	6	43	0	"	78	0	21	6	"	45	6
1924	46	0	"	68	6	45	6	"	85	0	25	0	"	55	6
1925	36	0	"	60	0	40	0	"	78	0	17	6	"	44	0

Year.	Wethers.				Ewes.				Lambs											
									Wethers		Ewes									
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.								
1926	30	0	to	54	0	31	0	to	70	0	21	9	to	49	0	19	0	to	50	0
1927	26	6	"	48	0	26	0	"	64	0	17	9	"	40	0	17	6	"	37	9
1928	29	0	"	45	9	24	0	"	57	0	16	6	"	38	6	17	0	"	38	9
1929	29	9	"	46	0	20	0	"	64	0	20	9	"	43	0	18	0	"	37	6
1930	31	6	"	45	0	28	6	"	60	0	20	0	"	45	9	20	0	"	37	6
1931	19	6	"	29	9	15	0	"	38	0	14	3	"	36	9	16	6	"	40	6
1932	12	0	"	19	6	15	0	"	29	0	7	3	"	13	6	7	0	"	14	6
1933	..	..	..	..	..	20	0	"	34	0	12	9	"	19	3	11	0	"	18	3
1934	..	..	..	..	..	22	6	"	44	0	16	0	"	25	3	16	6	"	24	3
1935	..	..	..	..	..	26	0	"	40	0	16	0	"	26	9	10	0	"	28	0
1936	..	..	..	..	..	27	6	"	48	0	18	6	"	37	6	16	0	"	29	0

TABLE No. 3.—PRICE OF WOOL, PER STONE OF 24 LB., SINCE 1818.

Year.	Laid Cheviot.		White Cheviot.		Laid Highland.		White Highland.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1818	40 0	to 42 2	..	..	20 0	to 22 6	..	..
1819	21 0	" 22 0	..	..	10 0	" 10 8	..	..
1820	20 0	" 22 0	..	..	9 0	" 10 0	..	..
1821	18 0	" 20 0	..	..	9 0	" 10 0	..	..
1822	12 6	" 14 6	..	..	5 0	" 6 6	..	..
1823	9 0	" 10 6	..	..	5 0	" 5 9	..	..
1824	13 6	" 15 0	..	..	6 0	" 6 8	..	..
1825	10 6	" 22 0	..	..	10 0	" 10 6	..	..
1826	11 0	" 14 0	..	..	5 0	" 5 6	..	..
1827	11 0	" 14 0	..	..	5 6	" 6 9	..	..
1828	8 0	" 11 0	..	..	5 6	" 6 0	..	..
1829	8 6	" 11 0	..	..	4 8	" 0 0	..	..
1830	9 0	" 11 0	..	..	4 6	" 5 0	..	..
1831	17 0	" 20 0	..	..	7 6	" 8 6	..	..
1832	14 0	" 16 0	..	..	7 0	" 7 6	..	..
1833	18 0	" 20 7	..	..	10 0	" 11 0	..	..
1834	21 0	" 24 6	..	..	5 6	" 7 0	..	..
1835	19 0	" 20 6	..	..	9 6	" 10 8	..	..
1836	21 0	" 25 0	..	..	10 0	" 14 0	..	..
1837	12 0	" 14 0	..	..	7 0	" 7 8	..	..
1838	19 0	" 22 6	..	..	6 0	" 10 0	..	..
1839	18 0	" 20 0	..	..	8 0	" 12 0	..	..
1840	15 0	" 0 0	..	..	7 0	" 0 0	..	..
1841	15 0	" 16 9	..	..	6 0	" 7 5	..	..
1842	12 6	" 14 0	..	..	not quoted.		..	..
1843	9 0	" 11 6	..	..	5 0	to 6 0	..	..
1844	15 0	" 18 0	..	..	not quoted.		..	..
1845	14 6	" 17 6	..	..	7 6	to 8 6	..	..
1846	12 0	" 14 6	..	..	8 0	" 8 6	..	..
1847	12 6	" 14 0	..	..	not quoted.		..	..
1848	9 6	" 11 0	..	..	4 8	to 0 0	..	..
1849	12 0	" 16 6	..	..	6 0	" 6 8	..	..
1850	15 0	" 17 6	..	..	8 0	" 8 6	..	..
1851	12 0	" 16 0	..	..	8 0	" 9 8	..	..
1852	18 0	" 15 0	..	..	8 0	" 9 0	..	..
1853	19 0	" 22 0	..	..	11 0	" 12 6	..	..
1854	12 0	" 15 0	..	..	7 6	" 8 6	..	..
1855	14 6	" 19 0	..	..	8 6	" 9 0	..	..
1856	19 0	" 21 6	..	..	11 0	" 0 0	..	..
1857	19 0	" 24 0	..	..	18 0	" 14 8	..	..
1858	15 0	" 17 0	..	..	8 9	" 10 0	..	..
1859	18 6	" 24 0	..	..	10 9	" 11 6	..	..
1860	22 0	" 32 0	27 0	to 38 0	10 0	" 11 8	..	..
1861	19 6	" 27 0	from 30s. upwards.		not quoted.		..	..
1862	18 6	" 26 0	30 0	to 37 0	11 6	to 16 0	..	..
1863	26 6	" 31 0	38 0	" 42 0	15 8	" 17 6	..	..
1864	31 0	" 39 0	47 0	" 54 0	17 6	" 20 0	..	..
1865	28 0	" 30 0	44 0	" 45 0	15 0	" 17 0	..	..
1866	24 0	" 30 0	30 0	" 38 0	14 0	" 16 0	..	..
1867	16 0	" 21 6	not quoted.		not quoted.		..	..
1868	19 0	" 26 0	28 0	to 32 0	8 6	to 9 0	..	..
1869	18 0	" 26 6	not quoted.		8 6	" 10 0	..	..
1870	15 0	" 23 6	25 0	to 26 0	9 6	" 0 0	..	..
1871	20 0	" 26 6	30 0	" 34 6	12 0	" 15 0	..	..
1872	26 0	" 37 6	40 0	" 48 0	18 0	" 21 0	..	..
1873	17 0	" 18 6	34 0	" 40 0	9 6	" 12 0	..	..
1874	18 6	" 26 6	30 0	" 34 0	9 6	" 13 0	..	..
1875	25 0	" 32 0	34 6	" 36 0	12 6	" 16 0	..	..
1876	20 0	" 24 0	30 0	" 34 6	9 6	" 12 0	..	..
1877	20 9	" 26 0	28 0	" 30 0	10 0	" 12 0	..	..
1878	18 9	" 25 0	27 0	" 32 0	8 6	" 11 6	..	..
1879	15 0	" 17 0	prices very low.		7 0	" 0 0	..	..
1880	20 0	" 24 0	35 0	to 32 6	10 6	" 11 6	14 6	to 15 6
1881	17 0	" 21 0	27 0	" 30 0	5 6	" 9 6	12 0	" 13 0
1882	14 0	" 18 0	27 6	" 28 0	7 6	" 9 0	13 0	" 14 0
1883	13 0	" 18 0	26 0	" 28 0	6 6	" 8 6	11 6	" 12 6
1884	13 0	" 18 0	26 0	" 28 0	6 6	" 8 6	11 6	" 12 6
1885	12 0	" 17 0	22 6	" 26 0	6 0	" 8 0	11 6	" 12 0
1886	13 0	" 18 0	28 0	" 27 6	6 6	" 8 6	11 6	" 12 0
1887	14 0	" 22 0	23 0	" 28 0	7 0	" 9 0	11 6	" 13 0
1888	13 0	" 30 0	28 0	" 28 6	7 0	" 9 0	11 0	" 12 6

TABLE No. 3.—PRICE OF WOOL—*Continued.*

Year.	Laid Cheviot.		White Cheviot.		Laid Highland.		White Highland.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1889	18 0	to 18 0	24 0	to 28 0	7 0	to 9 0	11 0	to 12 6
1890	18 0	" 18 0	24 0	" 28 0	7 0	" 9 0	11 0	" 12 6
1891	12 6	" 18 0	22 0	" 28 0	7 0	" 9 0	11 0	" 12 6
1892	12 0	" 18 0	20 0	" 28 0	7 0	" 8 6	10 6	" 12 0
1893	12 0	" 17 0	20 0	" 27 0	7 0	" 8 0	10 0	" 12 0
1894	12 6	" 16 0	20 0	" 26 0	7 6	" 8 0	10 0	" 12 0
1895	12 0	" 16 0	20 0	" 25 0	7 0	" 8 0	10 0	" 11 6
1896	11 0	" 15 0	19 0	" 24 0	7 0	" 8 0	10 0	" 11 6
1897	11 0	" 14 0	18 0	" 23 0	7 0	" 8 0	10 6	" 12 0
1898	10 0	" 18 0	16 0	" 20 0	7 0	" 8 0	10 0	" 11 6
1899	10 0	" 13 0	18 0	" 18 6	7 0	" 8 0	8 6	" 9 6
1900	9 9	" 12 0	18 0	" 18 6	6 9	" 7 9	8 0	" 9 6
1901	9 0	" 10 0	11 0	" 16 6	5 9	" 6 6	8 0	" 9 0
1902	9 0	" 10 0	11 6	" 17 0	6 0	" 6 6	8 6	" 9 6
1903	10 0	" 12 0	15 0	" 18 0	7 0	" 8 0	11 6	" 12 6
1904	15 0	" 17 0	20 0	" 21 9	9 0	" 10 0	14 0	" 15 0
1905	17 0	" 20 0	24 0	" 26 0	10 0	" 11 0	15 0	" 16 0
1906	18 0	" 21 0	27 6	" 28 6	11 6	" 13 0	16 6	" 17 6
1907	*		22 0	" 24 0	11 0	" 12 6	16 0	" 17 0
1908	*		16 0	" 18 0	†		8 0	" 8 6
1909	*		24 0	" 26 0	†		12 6	" 14 0
1910	*		25 0	" 30 0	†		18 0	" 14 6
1911	*		25 0	" 30 0	†		18 0	" 14 6
1912	*		24 0	" 29 0	†		14 0	" 15 0
1913	*		25 0	" 30 0	†		17 0	" 18 0
1914	*		24 0	" 29 0	†		15 0	" 15 6
1915†	*		42 0	" 46 0	†		21 0	" 22 0

\* No Cheviots smeared now.

† No Highlands smeared now

‡ These are July prices

## PRICE OF WOOL PER STONE OF 24 LB.—Continued.

		CHEVIOT.				HALF-BRED.				BLACK-FACE.		CROSS-BRED (BLACKFACE EWE AND LEICESTER RAM).			
		Hogg.		EWE AND WETHER.		Hogg.		EWE AND WETHER.		Hogg.	EWE AND WETHER.	Hogg.		EWE AND WETHER.	
		Washed.	Un- washed.	Washed.	Un- washed.	Washed.	Un- washed.	Washed.	Un- washed.			Washed.	Un- washed.	Washed.	Un- washed.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1 1916	CAITHNESS & SUTH- ERLAND	36 6	30 0	33 0	27 6	34 6	28 6	33 0	27 6	23 0	23 0	28 6	25 6	28 6	25 6
		40 0	32 6	34 0	29 0	35 0	29 0	34 0	28 6						
1 1917	CAITHNESS & SUTH- ERLAND	40 6	33 0	37 0	31 0	38 6	31 6	37 0	31 0	25 6	25 6	31 0	28 6	31 6	28 6
		44 6	36 0	37 6	32 6	39 0	32 6	37 6	31 6						
1 1918	CAITHNESS & SUTH- ERLAND	48 6	35 6	39 6	33 0	41 0	33 6	39 6	33 0	27 0	27 0	33 6	30 6	33 6	30 6
		47 6	33 6	40 0	34 6	41 6	34 6	40 0	33 6						
1919	CAITHNESS & SUTH- ERLAND	84 0	70 0	82 0	66 0	82 0	62 0	70 0	58 0	34	34 0	46 0	39 0	44 0	38 0
		88 0	74 0	84 0	68 0	84 0	63 0	72 0	60 0						
1920	CAITHNESS & SUTH- ERLAND	86 0	70 0	83 0	66 0	74 0	54 0	65 0	50 0	24 0	24 0	35 0	29 0	34 0	27 0
		90 0	74 0	87 0	68 0	76 0	56 0	68 0	52 0						
1921	CAITHNESS & SUTH- ERLAND	22 0	17 0	19 0	15 0	18 6	14 6	16 0	13 0	9 6	9 6	12 0	10 0	12 0	10 0
		23 0	18 0	20 0	16 0	19 6	15 6	17 0	14 0						
1922	CAITHNESS & SUTH- ERLAND	30 0	25 0	26 0	22 0	26 0	20 0	22 0	18 0	16 0	16 0	16 6	15 0	16 6	15 0
		31 6	26 0	27 0	23 0	27 0	21 0	23 0	19 0						
1923	CAITHNESS & SUTH- ERLAND	41 0	34 0	36 0	30 0	33 0	27 0	30 0	25 0	17 6	17 6	20 0	18 0	20 0	18 0
		43 0	35 0	37 0	31 0	34 0	28 0	31 0	26 0						
1924	CAITHNESS & SUTH- ERLAND	58 0	49 0	53 0	45 0	49 0	40 0	45 0	39 0	25 6	25 6	34 6	30 6	33 0	30 0
		60 0	50 0	54 0	46 0	50 0	41 0	46 0	40 6						
1925	CAITHNESS & SUTH- ERLAND	39 0	34 0	36 0	30 0	33 6	28 6	32 0	27 0	25 6	25 6	26 0	23 6	25 6	23 0
		40 0	35 0	37 0	31 0	34 0	29 0	33 0	26 0						
1926	CAITHNESS & SUTH- ERLAND	35 0	29 0	32 0	28 0	32 0	26 6	28 0	24 6	19 0	19 0	22 6	20 0	22 0	19 6
		36 0	30 0	33 0	29 0	33 0	27 6	29 0	25 6						
1927	CAITHNESS & SUTH- ERLAND	38 0	31 0	35 0	31 0	34 6	29 6	32 0	27 6	24 0	24 0	27 0	25 6	27 0	25 0
		39 0	32 0	36 0	32 0	35 0	30 0	33 0	28 6						
1928	CAITHNESS & SUTH- ERLAND	51 0	43 0	48 0	41 0	47 0	40 0	43 0	37 0	24 6	24 6	33 0	31 0	32 0	30 0
		52 0	44 0	49 0	42 0	48 0	41 6	44 0	38 0						
1929		37 0	32 0	34 0	29 0	34 0	29 0	32 0	27 0	24 0	24 0	27 0	25 0	26 0	24 0
1930		23 0	19 0	22 0	18 0	21 0	17 6	20 0	16 6	12 0	12 0	17 6	15 6	16 6	15 6
1931		16 6	13 6	15 6	13 0	15 0	13 0	13 6	11 6	11 0	11 0	12 0	10 6	11 6	10 0
1932		14 6	11 6	14 0	11 6	12 6	11 6	11 6	9 6	8 0	8 0	9 0	8 6	8 0	7 6
1933		20 0	17 0	19 0	16 0	18 0	16 0	17 0	14 0	11 6	11 6	12 0	11 0	11 6	11 0
1934		21 6	17 6	21 0	17 6	19 0	17 0	17 0	14 0	10 0	10 0	12 0	11 0	12 0	11 0
1935		26 0	21 0	24 6	19 6	21 6	19 0	19 0	17 0	10 6	10 6	14 0	12 6	14 0	12 6
1936		27 0	22 0	25 6	20 0	21 6	19 0	19 0	17 0	14 0	14 0	17 0	16 0	17 0	16 0

<sup>1</sup> The prices given were prices fixed by Government, and not free market prices.

## GENERAL SHOW AT MELROSE, 1936.

THE Society's One hundred and fifth Show was held at Melrose on Tuesday, 23rd June, and three following days. It was the twelfth Show to be held in the Border Show Division, previous Shows in that Division having been held as follows: Kelso, 6; Berwick, 2; Peebles, 1; Hawick, 1; and Melrose, 1. The former Show at Melrose was held in the year 1889.

Through the public-spirited action of a Local Joint Committee, consisting of representatives of the Town Councils of Melrose and Galashiels and the County Council of Roxburgh, an excellent site was provided for the Show at The Annay, on fields belonging to Dr James Curle of Priorwood, Melrose. The site was conveniently situated, in close proximity to the town, and within half a mile of the railway station. It consisted of several fields, which were level, had an excellent surface, and adjoined the main road between Edinburgh and Hawick. The appearance of the Showyard when completed was entirely pleasing, and the surroundings were most picturesque. A free supply of water was given by the town of Melrose.

With regard to the entries, Cattle showed a slight decrease compared with Aberdeen in the preceding year. That was not surprising in view of the depressed state of the Cattle Industry. Horses showed a gratifying increase in numbers over the figures of recent years. That increase was, of course, to some extent accounted for by a large entry of Hunters. Sheep secured a large entry, as was to be expected in the centre of an important sheep country. Pigs were fewer, but the number of Goats was considerably higher. As at Kelso in 1926, classes were provided for Shepherds' Pack Sheep, but these attracted only a moderate entry. The entries of Implements and Machinery in Motion were well up to the average, and provided the usual interesting and instructive display.

The Flower Show occupied a large section in proximity to the Main Square. Many outstanding exhibits were staged, and these were a source of attraction to many visitors.

A new feature was the arrangement whereby one-half of the Parade Ring was left open on the side facing the Main

Square, thus permitting more freedom of movement to visitors and a more open view of the proceedings within the Ring.

Full-dress Musical Rides and Trick Riding Displays by the 4th/7th Dragoon Guards and Sheep Dog Demonstrations were again provided on the Wednesday, Thursday, and Friday. There were also the usual Jumping Competitions, and, in addition, an attractive new feature was parades of Foxhounds, these being provided on different days by the Duke of Buccleuch's Foxhounds and the Foxhounds of the Lauderdale Hunt.

Her Royal Highness The Duchess of Gloucester honoured the Society by visiting the Show on the Wednesday and Thursday. Conducted by her brother, the Duke of Buccleuch, President of the Society, Her Royal Highness carried out an extended series of visits to various exhibits within the Show-yard. Her Royal Highness also viewed the parades of Stock from the Royal Box in the Grand Stand, and took lunch in the Royal Pavilion on both days. This Royal visit aroused much enthusiasm, especially as the Show was being held in the Duchess's own district, and, on every hand, she was accorded a most cordial welcome.

The weather throughout the Show, and for some time previously, was excellent, and the attendance of the public proved to be much larger than was anticipated. The total number who paid for admission during the four days was 61,514, which compared with 49,431 at Kelso in 1926.

The Directors are gratified to report that the Accounts show a credit balance of £169.

## STATISTICS.

The following tables give the number of entries in the various sections:—

### CATTLE.

SHORTHORN.							No. of Entries.
1. Aged bulls . . . . .	.	.	.	.	.	.	3
Extra stock . . . . .	.	.	.	.	.	:	1
2. Two-year-old bulls . . . . .	.	.	.	.	.	.	4
3. Two-year-old bulls . . . . .	.	.	.	.	.	.	1
4. One-year-old bulls . . . . .	.	.	.	.	.	.	8
5. One-year-old bulls . . . . .	.	.	.	.	.	.	11
6. Cows in milk, born before 1st December 1932 . . . . .	.	.	.	.	.	.	3
7. Three-year-old cows . . . . .	.	.	.	.	.	.	3
8. Two-year-old cows or heifers . . . . .	.	.	.	.	.	.	2
9. One-year-old heifers . . . . .	.	.	.	.	.	.	9
10. One-year-old heifers . . . . .	.	.	.	.	.	.	4

## DAIRY SHORTHORN.

11. Cows in milk	4
12. Cows in calf and not in milk	2
13. Cows in milk to first calving, born in 1933	2
14. Aged bulls	3
15. One-year-old bulls	5
	— 16

## ABERDEEN-ANGUS.

16. Aged bulls	8
17. Two-year-old bulls	14
18. One-year-old bulls	7
19. One-year-old bulls	14
20. Cows in milk, born before 1st December 1932	11
21. Three-year-old cows in milk	10
22. Two-year-old cows or heifers	14
23. One-year-old heifers	25
24. One-year-old heifers	8
	— 111

## GALLOWAY.

25. Aged bulls	5
26. Two-year-old bulls	1
27. One-year-old bulls	7
28. Cows in milk, born before 1st December 1933	7
29. Two-year-old cows or heifers	17
30. One-year-old heifers	21
	— 58

## BELTED GALLOWAY.

31. Bulls born before 1st December 1934	3
Extra Stock	1
32. Bulls born on or after 1st December 1934	3
33. Cows or heifers, born before 1st December 1933, in milk or in calf	6
34. Heifers born on or after 1st December 1933 and before 1st December 1934	4
35. Heifers born on or after 1st December 1934	7
	— 24

## HIGHLAND.

36. Aged bulls	2
37. Two-year-old bulls	1
38. One-year-old bulls	7
39. Cows of any age, with calf at foot	4
40. Three-year-old heifers	7
41. Two-year-old heifers	10
42. One-year-old heifers	6
	— 37

## AYNSHIRE.

43. Cows in milk, born before 1933	11
44. Cows in milk, born on or after 1st January 1933	6
45. Cows of any age, in calf	10
46. Heifers born on or after 1st June 1933, in calf	13
47. Heifers born in 1934	6
48. Heifers born in 1935	8
49. Bulls born before 1934	6
50. Bulls born in 1934	3
51. Bulls born in 1935	3
	— 66

## BRITISH FRISIAN.

52. Cows in milk, born in or before 1932 . . . . .	6
53. Cows in calf and not in milk, born in or before 1932 . . . . .	5
Extra Stock . . . . .	1
54. Cows in milk, born in 1933 or 1934 . . . . .	4
55. Heifers born in 1934 . . . . .	9
56. Heifers born in 1935, before 1st July . . . . .	8
57. Heifers born in 1935, on or after 1st July . . . . .	3
58. Bulls born in or before 1933 . . . . .	4
Extra Stock . . . . .	1
59. Bulls born in 1934 . . . . .	6
60. Bulls born in 1935 . . . . .	2
—	49
	<hr/>
	410
	<hr/>

## HORSES.

## CLYDESDALE STALLIONS AND COLTS.

61. Aged stallions . . . . .	5
62. Three-year-old entire colts . . . . .	4
63. Two-year-old entire colts . . . . .	10
64. One-year-old entire colts . . . . .	16
—	35

## CLYDESDALE GELDINGS.

65. Aged geldings . . . . .	10
66. Three-year-old geldings . . . . .	7
67. Two year-old geldings . . . . .	7
68. One-year-old geldings . . . . .	6
—	30

## CLYDESDALE MARES AND FILLIES.

69. Mares of any age, with foal at foot, or due to foal before 31st July 1936 . . . . .	5
70. Yeld mares, born before 1933 . . . . .	5
71. Three-year-old yeld mares or fillies . . . . .	10
72. Two-year-old fillies . . . . .	10
73. One-year-old fillies . . . . .	14
—	44

## HUNTERS.

74. Hunter brood mares, with foal at foot, or due to foal before 31st July 1936 . . . . .	4
75. Foals (drawn from Class 74) . . . . .	4
76. Geldings, born in 1933, in hand . . . . .	5
77. Fillies, born in 1933, in hand . . . . .	7
78. Geldings, born in 1934, in hand . . . . .	9
79. Fillies, born in 1934, in hand . . . . .	4
80. Colts or geldings, born in 1935, in hand . . . . .	5
81. Fillies, born in 1935, in hand . . . . .	9
82. Mares or geldings, born before 1932, to carry 14 stone 7 lb. and over, in saddle . . . . .	10
83. Mares or geldings, born before 1932, to carry 13 stone and under 14 stone 7 lb., in saddle . . . . .	11
84. Mares or geldings, born before 1932, to carry under 13 stone, in saddle . . . . .	15
85. Mares or geldings, born in 1932, in saddle . . . . .	16
86. Hack of hunter type, born in or before 1932, not exceeding 15.2 hands, in saddle . . . . .	13
—	112



## HIGHLAND PONIES AND WESTERN ISLAND PONIES.

87. Stallions, born before 1934, not exceeding 14.2 hands . . .	2
88. Entire colts, born on or after 1st January 1934, not exceeding 14.2 hands . . .	4
89. Mares, any age, not exceeding 14.2 hands, with foal at foot, or due to foal before 31st July 1936 . . .	3
90. Yeld mares or fillies, born before 1934, not exceeding 14.2 hands . . .	5
Extra Stock . . .	1
91. Fillies, born on or after 1st January 1934, not exceeding 14.2 hands . . .	8
	— 23

## SHETLAND PONIES.

92. Stallions, not exceeding 10½ hands, born before 1933 . . .	5
Extra Stock . . .	1
93. Entire colts, not exceeding 10½ hands, born in 1933 or 1934 . . .	5
94. Mares, not exceeding 10½ hands, with foal at foot, or due to foal before 31st July 1936 . . .	7
95. Yeld mares, not exceeding 10½ hands . . .	4
96. Fillies, not exceeding 10½ hands, born in 1933 or 1934 . . .	4
	— 26

## RIDING PONIES.

97. Mares or geldings, any age, over 13 2 hands and not exceeding 14.2 hands, in saddle . . .	15
98. Mares or geldings, any age, over 12 hands and not exceeding 13.2 hands, in saddle . . .	9
99. Mares or geldings, any age, not exceeding 12 hands, in saddle . . .	9
	— 33
	303

## JUMPING.

1. Horses or ponies, any height . . .	44
2. Horses or ponies, any height—Confined to competitors permanently resident in Scotland . . .	19
3. Horses or ponies, any height—handicap . . .	42
4. Horses or ponies, any height . . .	39
5. Horses or ponies, any height—handicap . . .	43
	— 187

## SHEEP.

## BLACKFACE.

100. Tups, three shear and over . . .	8
Extra Stock . . .	1
101. Tups, two shear . . .	15
102. Shearling tups . . .	36
103. Tup lambs . . .	16
104. Ewes above one shear, with lamb at foot . . .	7
105. Shearling ewes or gimmers . . .	12
106. Ewe lambs . . .	10
	— 105

## CHEVIOT.

107. Tups above one shear . . .	16
108. Shearling tups . . .	20
109. Tup lambs . . .	17
110. Ewes above one shear, with lamb at foot . . .	15
111. Shearling ewes or gimmers . . .	20
112. Ewe lambs . . .	15
	— 103

**BORDER LEICESTER.**

[illegible]

**HALF-BRED.**

[illegible]

OXFORD DOWN.

125. Shearling tups	.	.	.	.	.	.	11
126. Shearling ewes or gimmers	.	.	.	.	.	.	9
127. Tup lambs	.	.	.	.	.	.	10
128. Ewe lambs	.	.	.	.	.	.	10
							— 40

**SUFFOLK.**

129. Tups, one shear and over	.	.	.	.	.	.	16
130. Shearling ewes or gimmers	.	.	.	.	.	.	22
131. Tup lambs	.	.	.	.	.	.	18
132. Ewe lambs	.	.	.	.	.	.	17
133. Tup lambs, untrimmed	.	.	.	.	.	.	11
134. Ewe lambs, untrimmed	.	.	.	.	.	.	12
						—	96

WENSLYDALE LONGWOOL.

135. Shearling tups	.	.	.	.	.	.	4
136. Shearling ewes or gimmers	.	.	.	.	.	.	5
							— 9

### FAT SHEEP.

137. Three fat lambs, any breed or cross, dropped in the year of the Show 4

**SHEPHERDS' PACK SHEEP.**

## BLACKFACE.

138. }  
139. } Cancelled owing to insufficient entries—(Regulation 12).  
140. }

**CHEVIOT.**

141. Ewes above one shear, with lamb at foot	.	.	.	.	5
142. Shearling ewes or gimmers	.	.	.	.	6
143. Ewe lambs	.	.	.	.	5
				—	16

### HALF-BREED.

144. Ewes above one shear, with lamb at foot	.	.	.	.	6
145. Shearling ewes or gimmers	.	.	.	.	7
146. Ewe lambs	.	.	.	.	6
					<hr/> 19
					531

## GOATS.

147. Female goats, Toggenburg, British Toggenburg, or British Alpine, in milk	6
Extra Stock	1
148. Female goats, Saanen, or British Saanen, in milk	2
149. Female goats, any other variety, in milk	1
Extra Stock	1
150. Goatlings, Toggenburg, British Toggenburg, or British Alpine, over one but not exceeding two years	4
151. Goatlings, any other variety, over one but not exceeding two years	1
152. Female kids, any variety, not exceeding one year	9
153. Male kids, any variety, not exceeding one year	4
	<hr/> 29

## MILKING COMPETITIONS.

154. For quality, open to Classes 147, 148 and 149 (10 entries)	...
155. For quantity, open to Classes 147, 148 and 149 (10 entries)	...
	<hr/> ...
	<hr/> 29

## PIGS.

## LARGE WHITE.

156. Boars born before 1935	5
Extra Stock	1
157. Boars born in 1935 before 1st July	4
158. Boars born in 1935 on or after 1st July	10
159. Boars born in 1936	8
160. Sows born before 1935	8
Extra Stock	1
161. Sows born in 1935 before 1st July	11
162. Sows born in 1935 on or after 1st July	11
163. Sows born in 1936	8
	<hr/> 67

## LARGE BLACK.

164. Boars born before 1936	3
165. Boars born in 1936	3
166. Sows born before 1935	5
167. Sows born in 1935	3
168. Sows born in 1936	4
	<hr/> 18

## BACON PIG COMPETITION

	85
	47
	<hr/> 132

## POULTRY.

1-123.	454
	<hr/>

## DAIRY PRODUCE.

1-4.	43
	<hr/>

## EGGS.

1-5.	65
	<hr/>

## HONEY, &amp;c.

1-21.	148
	<hr/>

## RURAL INDUSTRIES.

1-26.	449
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## BUTTERMAKING.

Class 1 (Open), 37 ; Class 2 (Novice), 41 . . . . .	78
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## HORSE-SHOE MAKING.

Class 1 (Open) . . . . .	24
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## HORSE-SHOEING.

Class 1 (Open), 34 ; Class 2 (Juniors), 9 . . . . .	43
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## LIVE STOCK JUDGING.

Open to persons not exceeding 21 years of age . . . . .	122
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## SUMMARY.

1. Cattle . . . . .	410
2. Horses . . . . .	303
3. Jumping . . . . .	187
4. Sheep . . . . .	531
5. Goats . . . . .	29
6. Pigs . . . . .	85
7. Bacon Pigs . . . . .	47
8. Poultry . . . . .	454
9. Dairy Produce . . . . .	43
10. Eggs . . . . .	65
11. Honey, &c. . . . .	148
12. Rural Industries . . . . .	449
13. Buttermaking . . . . .	78
14. Horse-Shoe Making . . . . .	24
15. Horse-Shoeing . . . . .	43
16. Live Stock Judging . . . . .	122
	3018

The following table gives a comparative view of the entries of cattle, horses, sheep, goats, pigs, poultry, eggs, dairy produce, bee appliances and honey, wool, rural industries, &c., and implements, of the value of the premiums offered, and of the receipts at the entrance-gates, grand stands, and for catalogues at the Shows which have been held in the Border Show Division :—

Year.	Cattle.	Horses.	Sheep.	Goats.	Pigs.	Poultry.	Eggs.	Dairy Produce.	Honey, &c.	Wool.	Rural Industries	Horse-Shoeing.	Live Stock Judging.	Butter-making.	Implements.	Premiums.	Drawings at Show.
1832	88	18	89	..	16	..	..	..	..	..	..	..	..	..	11	\$580	\$129
1841	175	96	209	..	25	..	..	..	..	..	..	..	..	..	60	1050	410
1854	179	141	358	..	54	87	..	..	..	..	..	..	..	..	357	1500	805
1868	245	197	276	..	49	87	..	..	..	..	..	..	..	..	1101	1300	1,423
1872	274	314	269	..	86	216	..	..	..	..	..	..	..	..	1777	1888	2,171
1880	275	226	224	..	23	202	..	..	..	..	..	..	..	..	1578	2671	1,664
1889	271	243	290	..	42	220	..	51	..	..	..	..	..	..	1288	2276	2,214
1898	244	270	365	..	25	335	..	38	..	24	..	21	..	..	1933	2855	2,192
1906	253	258	291	..	40	438	..	72	..	..	..	..	..	..	1658	3072	4,085
1914	264	357	440	..	35	418	..	33	..	93	..	..	..	..	1878	4142	4,048
1926	430	284	597	31	159	546	..	55	113	75	405	42	..	..	2366	6004	9,218
1936	410	303	531	29	132	454	65	43	148	..	449	67	122	78	2536	7188	12,066

## A COMPARISON.

The following figures relating to some of the most successful Shows the Society has held will be perused with interest :—

	Cattle.	Horses.	Sheep.	Goats.	Pigs.	Poultry.	Rabbits.	Total Live Stock.	Implements.	Premia.	Drawings at Show.	Profit.
Glasgow, 1867 .	286	212	257	..	50	150	..	968	1844	£1600	£3,005	£1807
Edinburgh, 1869	310	212	340	..	22	239	..	1123	1900	1600	4,078	2067
Glasgow, 1875	411	405	296	..	40	479	..	1689	2220	2665	6,231	3316
Edinburgh, 1877	399	342	305	..	30	234	..	1250	2292	2714	6,734	3710
Edinburgh, 1884	580	453	493	..	35	253	..	1814	2282	4843	6,548	1855
Edinburgh, 1893	390	349	294	..	31	360	..	1414	2268	2600	4,918	2323
Aberdeen, 1894	314	324	184	..	34	365	..	1221	2532	2440	5,121	1878
Perth, 1896	292	258	204	..	20	374	..	1148	1945	2205	4,788	2511
Glasgow, 1897	317	350	245	..	30	275	..	1217	2227	2897	4,892	2021
Edinburgh, 1899	386	518	477	..	46	551	..	1978	2585	3344	10,285	3911
Stirling, 1900	321	288	369	..	28	457	..	1463	2095	2915	4,305	1078
Inverness, 1901	360	257	204	..	22	499	..	1340	1460	2806	2,485	99
Aberdeen, 1902	330	253	248	..	42	475	..	1343	1988	2796	4,413	1604
Perth, 1904	342	315	289	..	35	413	..	1394	1972	3058	4,993	1828
Glasgow, 1905	310	462	264	..	60	534	..	1750	1875	3702	4,473	1203
Peebles, 1906	253	250	291	..	40	438	..	1250	1658	3072	2,596	416
Edinburgh, 1907	363	464	352	..	58	605	..	1842	2140	3614	7,061	2309
Aberdeen, 1908	331	299	237	..	42	509	..	1418	1931	3045	4,596	1881
Stirling, 1909	330	355	240	..	54	539	..	1527	1877	3017	4,684	1100
Dumfries, 1910	270	355	295	..	51	491	..	1455	1950	3067	8,411	542
Paisley, 1913	408	472	354	..	48	586	..	1798	1968	5199	6,468	2527
Edinburgh, 1919	315	301	221	60	43	398	..	1258	1805	4517	17,377	3275
Aberdeen, 1920	340	250	279	19	112	587	..	1697	2065	4608	14,120	1879
Stirling, 1921	367	279	299	59	188	582	..	1774	2201	5055	12,822	2350
Dumfries, 1922	422	272	339	41	229	588	..	1891	2156	5488	11,428	1090
Perth, 1924	406	283	366	21	202	760	..	2038	2582	5712	10,758	2311
Glasgow, 1925	461	340	345	31	178	577	178	2114	2570	6136	12,865	4226
Kelso, 1926	430	284	507	31	159	546	108	2155	2366	6004	9,218	324
Edinburgh, 1927	462	357	493	63	201	724	184	2441	2874	6019	12,315	2090
Aberdeen, 1928	421	277	349	25	80	578	120	1850	2377	6181	11,031	1882
Edinburgh, 1931	635	389	684	47	117	644	125	2641	2991	9608	12,478	704
Dundee, 1933	443	256	396	22	75	491	89	1772	2471	6979	12,668	4813
Glasgow, 1934	507	287	356	27	155	532	85	1949	2832	7034	13,535	3584
Aberdeen, 1935	464	230	388	20	230	500	..	1830	2778	6940	11,372	645
Melrose, 1936	410	303	531	29	132	454	..	1850	2536	7188	12,066	169

## CATTLE.

The entry of Cattle numbered 410. While this was 20 less than the number entered at the last Border Show at Kelso in 1926, it was substantially in excess of the numbers at previous Shows in the Division.

Shorthorn entries numbered 49, and 42 animals were forward. As was the case last year, the majority of the entries were in the yearling classes, some of the other classes being very small. Mr Albert James Marshall, Bridgebank, Stranraer, further added to his many successes by carrying off the Championship with "Cruggleton Beverley," 256,591 (Fig. 57), which was Champion last year, and which on this occasion was entered as Extra Stock. This dark roan, home-bred, four-year-old bull was shown in excellent form. His sire was "Cruggleton Colonel," 236,411, and dam "Brenda Blythesome," 120,952. This bull also won the Paisley Per-

petual Gold Challenge Cup and the Shorthorn Society's Special Prize of £20 for best bull. The Reserve Champion animal was "Millhills Rothés Queen 17th," a handsome red yearling heifer, bred and exhibited by Mr Duncan M. Stewart, Millhills, Crief. This animal won the Duthie Perpetual Challenge Cup, for which "Cruggleton Beverley" was not eligible, having won it last year, and the Shorthorn Society's Prize of £20 for the best female. The Emilio R. Casares Junior Memorial Cup was won by Mr Albert J. Marshall with "Cruggleton Captivator," a yearling red bull of beautiful quality bred by exhibitor, and Mr Duncan M. Stewart secured the Silver Cup given by Mr W. M'Nair Snadden for the best group of three Shorthorns, with his Reserve Champion "Millhills Rothés Queen 17th," a white yearling bull "Collynie Era," and a three-year-old roan cow "Uppermill Paula."

Dairy Shorthorns, for which classes were provided in view of the comparative nearness of Melrose to the home of the breed, were disappointing in numbers. The Championship was secured by Mr Edward M'Gregor, Manor Farm, Lillington, Leamington Spa, with "Illington Duke 28th," 271,171 (Fig. 58), a two-year-old home-bred bull of the Cumberland dairy type, level-fleshed, and of a good colour. His sire was "Farrar Dairy Duke," 222,996, and dam "Parton Fragrance 2nd," 62,559. The Reserve Champion animal was "Roseleaf's Gift," 239,956, a seven-year-old bull, the property of Mr Joseph Barnes, Barugh Syke, Wigton, Cumberland.

There was a magnificent display of Aberdeen-Angus Cattle, of which there were 111 entries and 100 animals actually forward. For the third year in succession, the President's Champion Medal was awarded to "Julie Erica," 100,145 (Fig. 59), the famous winning cow belonging to and bred by Mr J. E. Kerr of Harviestoun, Dollar. This cow, which is now four years and three months old, was shown in beautiful condition. Her sire was "Jubal Eric," 74,413, and dam "Julla Erica," 87,335. This animal also won the Aberdeen-Angus Cattle Society's Champion Gold Medal, the Ballindalloch Challenge Cup for best cow, and the Falconer L. Wallace Silver Cup for best female. She was also one of a group which won for her owner the Silver Cup presented by Mr J. E. Kerr for the best group of Aberdeen-Angus Cattle. The Reserve Champion was "Black Briar of Kilham," 96,606, a five-year-old cow of excellent breed character, bred and exhibited by Captain A. L. Goodson, Kilham, Mindrum, Northumberland. The Ballindalloch Cup for best bull was won by Captain F. B. Atkinson, Gallowhill, Morpeth, with "Elver of Gallowhill," 87,177, a fine two-year-old bull bred by the exhibitor. This animal also secured the Silver Cup given by Senor Eduardo Estanguet, Argentina.

There was a good show of Galloways, especially in the

classes for younger females. The Championship of the breed was secured by Mr Robert Jardine Paterson, Balgray, Lockerbie, with "Exclusive of Balgray," 19,107 (Fig. 60), a capital type of Galloway bred by exhibitor and got by "Magnate of Drumlanrig," 17,674, out of "Bell 3rd of Askerton," 30,292. This bull also secured for his owner the Dr Gillespie Memorial Challenge Trophy for the best Galloway animal. The Reserve for Championship honours was "Lavender 2nd of Crawfordton," 32,923, a seven-year-old cow belonging to Mr James Scott Anderson, Tullichewan, Alexandria. This cow was also awarded the Silver Challenge Cup given by the Galloway Cattle Society for the best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Trophy.

Belted Galloways were deficient in numbers, but nevertheless provided an attractive display. As was the case last year, the principal awards went to Mr J. Faed Sproat, Boreland of Anwoth, Gatehouse, who won the President's Champion Medal, and also the Knockbrex Challenge Cup, with "Gartmore Charles," 701 B. (Fig. 61), a nine-year-old bull shown in first-class condition. He was bred by Sir August Cayzer, Bt., Gartmore, his sire being "Mark Hector," 56 B., and dam "Gartmore Ruth," 1330 B. The Reserve animal was "Gartmore Peter," 1033 B., exhibited by Nalc Company, Ltd., and bred by Sir August Cayzer, Bt. The Ian Hamilton Silver Challenge Cup was won by "Gartmore Helen II.," 3328 B., exhibited and bred by Nalc Company, Ltd.

Although showing a slight decrease in numbers as compared with last year's Show, Highland Cattle made a fine appearance, all animals forward being in good bloom. The principal awards were won by Mrs Lees-Milne of Killundine, Drinin, Oban, who took the President's Champion Medal with her home-bred three-year-old heifer "Baravalla Smiorail II. of Killundine," 10,636 (Fig. 62). The sire was "An Gille Siobhalt of Lochdhu," 3520, and dam "Baravalla Smiorail V. of Kilberry," 9904. The same animal was awarded the Breed Society's Perpetual Victory Challenge Cup for best female, and the same exhibitor's yearling bull, "Merneal of Killundine," 3844, Reserve Champion animal, was the winner of the corresponding Victory Challenge Cup for males.

A less numerous section than usual, Ayrshires gave rise to keen competition, and all the entries maintained a good quality. At the head of the successful animals stood "Logan Mains Mary 2nd," A 9665 (Fig. 63), a splendid seven-year-old cow, the property of Lady Victoria Wemyss, Wemyss Castle, East Wemyss. Bred by Messrs J. & J. McIntyre, Logan Mains, Port Logan, her sire was "Millantae Complete," 26,017, and dam "Logan Mains Mary," B 6712. In addition to the President's Champion Medal, she won the Cowhill Champion

Cup, the Ayrshire Cattle Herd-Book Society's Special Prize of £10 for best female, and was also placed first in the Special Class for cows from Grade A. (T.T.) or Certified Herds. The Reserve Champion was "Meikle Kilmory Moss Rose 10th," 30,069, a six-year-old cow from the well-known herd of Mr James M'Alister, Meikle Kilmory, Rothesay. A four-year-old bull, "Hairmyres Milkboy," 32,207, the property of Mr William Fleming, Auldtoun, Ashgill, Dalserf, and bred by the County of Lanark, Hairmyres Colony, East Kilbride, won the Breed Society's prize of £10 for best male animal.

British Friesians made a good level exhibit, 39 animals being forward out of a total entry of 49. The Trustees of Sir Alasdair W. MacRobert, Bt., Douneside Home Farm, Tarland, won the chief awards with an outstanding three-year-old bull, "Douneside (imported 1936) Lodewijk Bertus 7th," 45,841 (Fig. 64). Bred by Mr F. A. Bijlsma, Jelsum, Friesland, Holland, this animal was got by "Bertus 2nd," 19,191, F.R.S., out of "Ymkje 7th," 61,671, F.R.S. These honours included the President's Champion Medal, the Edinburgh Corporation Perpetual Gold Challenge Cup, the MacRobert Champion Silver Bell, and the Breed Society's Special Prize of £5 for best male. The same exhibitors also showed the Reserve Champion animal, this being the two-year-old bull "Douneside Benachie," 43,835, and, in addition, gained the British Friesian Cattle Society's Silver Challenge Cup for the best group of three animals. The Breed Society's prize of £5 for the best female was secured by Mr T. E. Gladstone, Margery Flatts, Lanchester, County Durham, his successful entry being the five-year-old cow "Dignit Glossy," 155,658, bred by himself.

#### HORSES.

The entry of horses showed a satisfactory increase in numbers, which was largely accounted for by the great entry in the classes for Hunters.

Clydesdale entries, however, showed a decrease, and there were many absentees. It was only in the younger classes that any keenness of competition asserted itself. The President's Champion Medal for best stallion or colt was awarded to the five-year-old "Beneficial," 22,074 (Fig. 65), owned by Messrs T. & M. Templeton, Sandyknowe, Kelso. Bred by Mr Robert A. Wilson, Kirkholm, Ballantrae, his sire was "Benefactor," 20,867, and dam "Kirkholm Margaret," 58,777. This magnificent bay horse has had a wonderful Show record. As a yearling he won the President's Champion Medal and the Cawdor Cup at the Society's Show at Inverness in 1932, and this year won the supreme award at the Stallion Show. The runner-up to the Champion, and winner of the Cawdor Challenge Cup for males, was the brown yearling colt "Windlaw Aristocrat," owned by Mr James Clark, Windlaw, Car-



munnock, and bred by Mr Thomas Robertson, Townhead Farm, Annbank.

The entries of Clydesdale geldings showed an increase, and these made an excellent all-round display. The winner of the President's Champion Medal and the Meiklem Gold Challenge Cup was "Douglas" (Fig. 66), sired by "Hiawatha Print," 21,088, and bred by Mr A. Swinbank, Breckonhill, Stockton-on-Tees. He was owned by Mr James Clark, Windlaw, Carmunnock, who thus recorded a triple triumph, his previous successes having been gained at the Shows of 1932 and 1933. The Reserve Champion was "Carrick," shown by Mr William Wilson, Blackbyres, Barrhead.

After exceptionally keen competition, the Champion animal in the Clydesdale mare and filly classes was found in the very attractive two-year-old bay filly "Rosetta" (Fig. 67), the property of Mr Alexander Murdoch, East Hallside, Cambuslang. Bred by Mr George Argo, Petty, Fyvie, her sire was "Benedictine," 21,836, and dam "Dunure Roseway," 53,302. In addition to carrying off the President's Champion Medal, this animal was awarded the Cawdor Challenge Cup for females and the Angus Perpetual Silver Challenge Cup. As her breeder, Mr Argo secured the William Taylor Memorial Prize of £10. The Reserve for the Championship, for the second year in succession, was the well-known home-bred mare "Lucinda," the property of Mr George M'Dowall, Briarbank, Stranraer.

Though a large entry of Hunters was expected at a Show held in the principal hunting district of the country, it was particularly gratifying that the increased classification specially provided for the occasion should attract exhibitors in such large numbers as to establish a record for this section. In most of the classes the competition was very keen. Mr A. D. Thomson of Nenthorn, Kelso, led with the six-year-old bay gelding of his own breeding, "Novadra" (Fig. 68). A fine upstanding gelding which worthily upheld the reputation of the Border district, he was sired by "Ardavon" out of "Red Tape." He obtained for his owner the President's Champion Medal, the Fife and Kinross Perpetual Gold Challenge Cup, and the Dumfries Centenary Silver Challenge Cup. Another Border exhibit, "Irish Jubilee," a seven-year-old bay gelding belonging to Mr John Rodgers, County Stables, Selkirk, was placed as Reserve. "Old Dromore," a fine Irish-bred chestnut filly, won for Mrs M. E. Hamilton, Abbey Hotel, Melrose, the Hunters' Improvement, &c., Society's Champion Gold Medal.

The entries for Highland and Western Island Ponies exceeded those at last year's Show, and these made an attractive exhibit. Major D. G. Moncrieff Wright, Elcho Park, Rhynd, Perth, was successful in obtaining the Championship and the Kinmonth Perpetual Gold Challenge Quaich with his aged grey mare "Staffin Princess," 6236 (Fig. 69). Though in her

fifteenth year, she was shown in wonderful condition. The runner-up for Championship honours, and winner of the Highland Pony Society's Prize of £8 for best female animal, for which "Staffin Princess," shown as Extra Stock, was not eligible, was the two-year-old filly "Shelagh," 6816, bred by, and the property of, Mr T. G. Wilson, Carbeth Home Farm, Balfron Station. The Highland Pony Society's corresponding prize for best male, and the National Pony Society's Special Prize of £5 for best colt, went to Mrs R. Wemyss Honeyman, Derculich, Strathtay, for her yellow dun colt "Jason of Derculich," 1934. The National Pony Society's Special Prize of £5 for best stallion born before 1934 was won by Mr Ian Ewing, Mounthooly, Jedburgh, with his three-year-old "Mounthooly Rover," 1972.

The classes for Shetland Ponies brought out the same number of entries as last year—26, and as most of these were forward, this section fully maintained its popularity in the Parade Ring. Mr J. E. Kerr of Harviestoun, Dollar, for the second year in succession, secured the President's Champion Medal with his beautiful home-bred four-year-old black mare "Harviestoun Pixie" (Fig. 70). Her sire was "Dunsmuir," 1155, and dam "Harviestoun Pryde," 4544. She again scored over her Aberdeen rival "Birk of Manar," 1301, who also, for the second year in succession, was awarded the Reserve Championship. The latter, a five-year-old black stallion, secured for his owner, Mr Alexander Davidson, Mundurno, Bridge-of-Don, the Shetland Pony Stud-Book Society's Silver Medal for the best exhibit of the sex opposite to that of the winner of the President's Champion Medal. At this Show a new Trophy was offered for competition. This was a Perpetual Silver Challenge Cup, value £50, kindly presented by a few members of the Shetland Pony Stud-Book Society for best group of Shetland Ponies consisting of one male and two females. The honour of first winning this Cup went to Mr J. E. Kerr, who secured it with a group of three home-bred animals—his Champion mare "Harviestoun Pixie," a three-year-old colt "Harviestoun Star," and a three-year-old filly "Harviestoun Pearl."

For this Show an additional class was added to the section for Riding Ponies, making three in all. These were well filled, and gave an interesting display. The first and second prizes in class I. went to Mr Launcelot E. Smith, Piper Close, Corbridge-on-Tyne, for his mare "Primula" and his gelding "Mickey Mouse," respectively. Miss Margaret E. Vaux, Brandfields, Cusworth, Doncaster, took first place in the second class with her gelding "Dazzle," and in the third class Miss Margaret Scott, Legerwood, Earlston, topped the list with her mare "Ginger."

The expectation of a large entry for the Jumping Competitions was fully realised, and as there were so many first-

class horses forward, competition was very keen, so much so, that in each class the leading places had to be shared by more than one competitor. The champion prize of £10 for most points in the open classes was won by Mr Thomas Makin, Newton Farm, Newton, Yorks., with his gelding "Sparkle."

#### SHEEP, GOATS, PIGS, &C.

The entries of sheep were the largest recorded, with the exceptions of those for the Hundredth Show at Edinburgh in 1931 and for Kelso Show in 1926. They numbered in all 531, and were well distributed over the principal classes. Cheviots, shown in their native district, were naturally strong numerically. Blackface, Border Leicester, and Suffolk breeds were also prominent in numbers, with outstanding animals among the prize-winners. As at Kelso Show, classes were provided for Shepherds' Pack Sheep, but, unfortunately, these did not attract a favourable entry. Goats, with 29 entries, showed a slight increase over the low record of last year. Pigs were not so numerous as in the previous year. For the fourth year in succession, Mr John E. B. Cowper, Gogar House, Edinburgh, obtained the Dundee Citizens' Perpetual Silver Challenge Cup for the best Large White Pig. Photographs of the winners of the President's Champion Medals for sheep, goats, and pigs are reproduced in figs. 71 to 81.

Exhibits of Poultry fell short of last year's numbers, and of the average for recent years, but the all-round quality maintained a good standard. The sections for Eggs, Dairy Produce, Honey, and Rural Industries were well supported by excellent exhibits in the various classes.

The Flower Show again provided an attraction of much interest to the many visitors to the Show, and the exhibitors, as usual, had spared no pains to make this section one of the most popular for the general public.

Although there were fewer competitors in the Horse-Shoeing and Shoe-Making classes, the usual keen rivalry was manifest, and the workmanship showed no signs of falling off.

In order to restrict the number of persons competing in the Live Stock Judging Competition, the maximum age limit was lowered from 23 years to 21 years. Although this had, to some extent, the desired effect, there was a large entry—122. After very keen competition the 'Glasgow Herald' Challenge Cup was gained by Team B. of the West Perthshire Young Farmers' Club. The Gold Medal, presented by Messrs George Outram & Co. Ltd., Glasgow, to the highest individual scorer, went to Mr John Logan, Powis Mains, Stirling.

The Buttermaking Competitions, which were held on the four days of the Show, again provided interest for many visitors, and the results again demonstrated the high standard of efficiency attained by the competitors at the Society's Shows.



Fig 57.—SHORTHORN BULL, "CRUGGLFION BEVERLFY" 256,591.

Winner of President's Medal for best Shorthorn animal, Melrose Show, 1936 Bred by and the property of Mr Albert James Marshall, Bridgebank, Stranraer Age three years and ten months



Fig 58 —DAIRY SHORTHORN BULL, "LILLINGTON DUKE 28TH" 271,171.

Winner of President's Medal for best Dairy Shorthorn animal, Melrose Show, 1936 Bred by and the property of Mr Edward McGregor, Manor Farm, Lillington, Leamington Spa Age one year and nine months

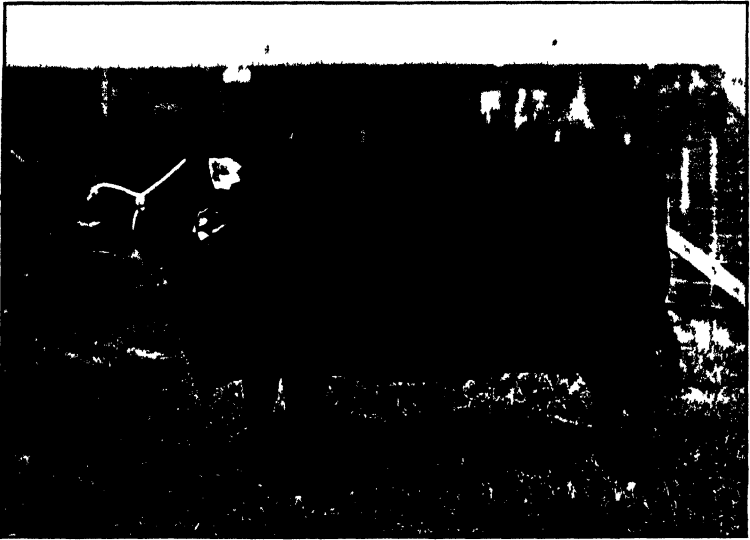


Fig 59 —ABERDEEN ANGUS COW, "JULIE IRICA" 100,145

Winner of President's Medal for best Aberdeen Angus animal Melrose Show 1936 Bred by and the property of Mr J F Kerr of Harvestoun Dollar Age four years and three months



Fig 60 —GALLOWAY BULL, "EXCLUSIVE OF BALGRAY" 19,107

Winner of President's Medal for best Galloway animal Melrose Show 1936 Bred by and the property of Mr Robert Jarline Paterson, Balgray, Lochcristie Age three years and six months



Fig 61.—BELTED GALLOWAY BULL, "GARTMORE CHARLES" 701 B

Winner of President's Medal for best Belted Galloway animal, Melrose Show, 1936. The property of Mr J. Ford Sproat, Boreland of Anwoth, Gatchouse, Galloway. Bred by Sir August Cayzer, Bt., Gartmore, Perthshire. Age nine years and five months.

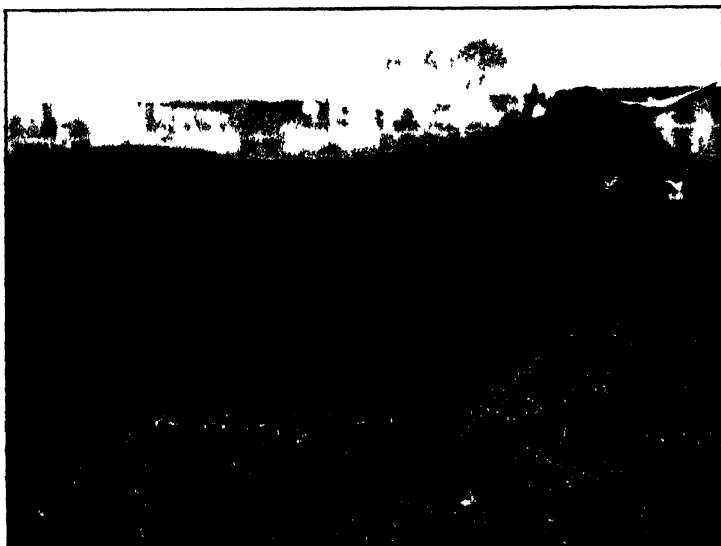


Fig 62.—HIGHLAND HEIFER, "BARAVALLA SMIORAIL II. OF KILLUNDINE" 10 636.

Winner of President's Medal for best Highland animal, Melrose Show, 1936. Bred by and the property of Miss Lees Milne of Killundine, Drimmin, Oban. Age three years and five months.



Fig 63—AYRSHIRE COW, "LOCAN MAINS MARY 2ND" A 9665

Winner of President's Medal for best Ayrshire animal, Melrose Show 1936. The property of Lady Victoria Wemyss, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss. Bred by Messrs J. & J. McIntyre, Logan Mains, Port Logan. Age seven years and five months.



Fig 64—BRITISH FRIESIAN BULL,

"DOUNESIDE (imported 1936) LODIEWIJK BEETUS 7TH" 45,841

Winner of President's Medal for best British Friesian animal, Melrose Show, 1936. The property of the Trustees of Sir Alasdair W. MacRobert, Bart., Douneside Home Farm, Tairland. Bred by Mr F. A. Bijlsma, Jelsum, Friesland, Holland. Age three years and three months.

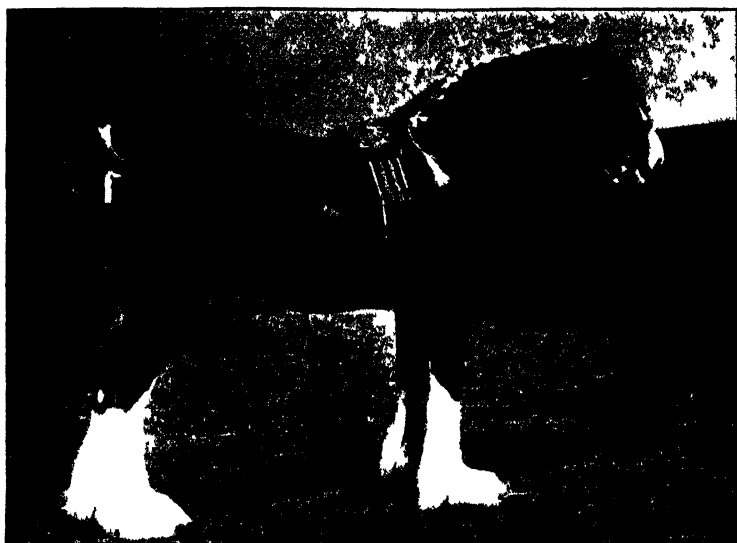


Fig 65 —CLYDESDALE STALLION "FENNITHAL 22 074

Winner of 1st Prize Medal for best Clydesdale Stallion or Colt Melrose Show 1936 The property of Messrs J & M Lockett & Sons, Ltd. Breeding Mr Robert A. Wilson, Kilmarnock, Ayrshire. Age five years.



Fig 66 —CLYDESDALE GELDING, 'DOUGLAS

Winner of President's Medal for best Clydesdale Gelding Melrose Show 1936 The property of Mr James Clark, Winthorpe, Nottingham. Breeding Mr A. Swinbank, Breckonhill, Sedgfield, Stockton-on-Tees. Age four years.





Fig. 67 —CLYDESDALE FILLY, "ROSFITA "

Winner of President's Medal for best Clydesdale Mare or Filly Melrose Show, 1936. The property of Mr Alexander Murdoch, East Hallside, Cambuslang. Bred by Mr George Argo, Petty, Fyvie. Age two years and one month.



Fig. 68 —HUNTER GELDING, "NOVADRA."

Winner of President's Medal for best Hunter, Melrose Show, 1936. Bred by and the property of Mr A. D. Thomson, Nenthorn, Kelso. Age six years and one month.



Fig. 69 —HIGHLAND PONY MARE, "STAFFIN PRINCESS" 6236.

Winner of President's Medal for best Highland or Western Island Pony, Melrose Show, 1936.  
The property of Major D. G. Moncrieff Wright, Elcho Park, Rhynie, Perth. Bred by Mr. John  
Macdonald, Sarsath, Staffin, Isle of Skye. Age fourteen years and one month.



Fig. 70.—SHETLAND PONY MARE, "HARVESTOUN PLOVER."

Winner of President's Medal for best Shetland Pony, Melrose Show, 1936. Bred by and the  
property of Mr. J. E. Kerr of Harvestoun, Dollar. Age four years.



Fig. 71 —BLACKFACE SHEARING TUP

Winner of President's Medal for best Blackface Sheep, Melrose Show, 1936. Bred by and the property of Mr Matthew G. Hamilton, Woolfords, Coburnshire.



Fig. 72.—CHEVIOT SHEARING TUP, "BUSHELHILL MOSCOT."

Winner of President's Medal for best Cheviot Sheep, Melrose Show, 1936. Bred by and the property of Mr John Thomson, Bushelhill, Cockburnspath.

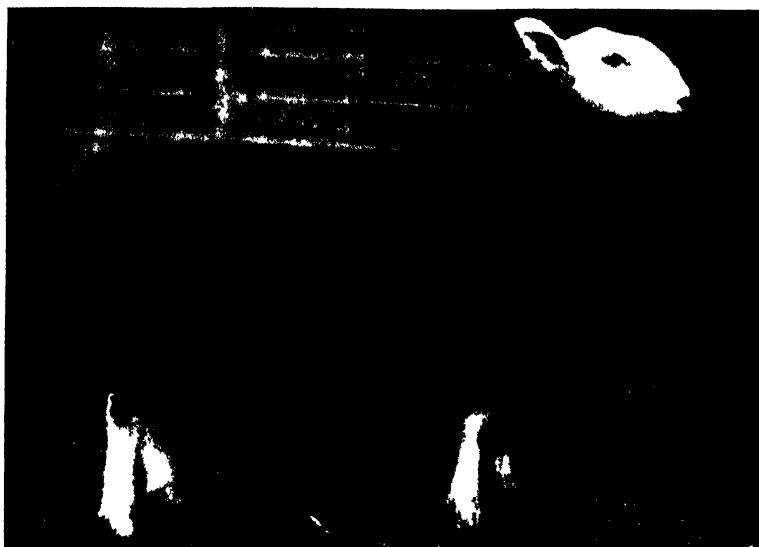


Fig. 73.—BORDER LEICESTER SHEARLING TUP.

Winner of President's Medal for best Border Leicester Sheep, Melrose Show, 1936. The property of Messrs James Howie & Sons, Muirside, Dumfries. Bred by Mr A. B. Howie, Eshott Brooks, Felton, Morpeth.

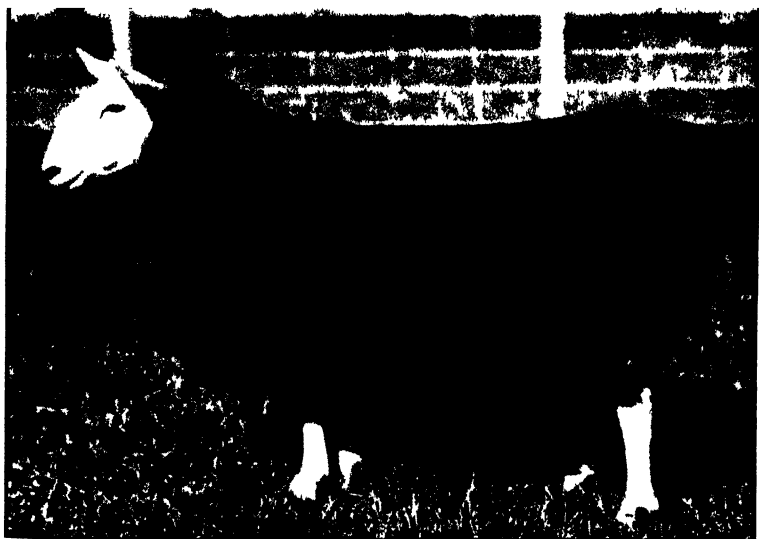


Fig. 74.—HALF-BRED SHEARLING EWE.

Winner of President's Medal for best Half-Bred Sheep, Melrose Show, 1936. The property of Mr William M'Laren, Fairnington, Roxburgh. Bred by Mr John Jeffrey, Deuchine, Prestonkirk.



Fig 75 —OXFORD DOWN EWE LAMB

Winner of President's Medal for best Oxford Down Sheep, Melrose Show, 1936 Bred by and the property of Messrs T & M Templeton Sandyknew Kelso



Fig 76 —SUFFOLK TROTTER LAMB.

Winner of President's Medal for best Suffolk Sheep, Melrose Show, 1936 Bred by and the property of Commander J A Duncan, C B, Parkhill, Arbroath

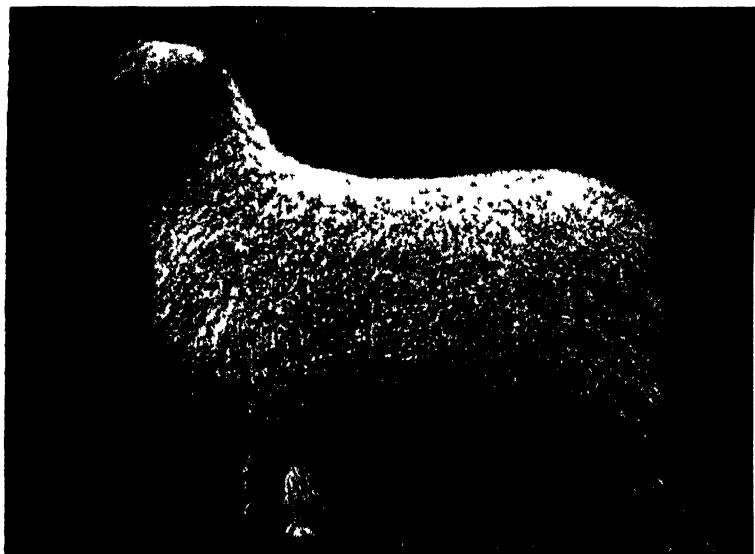


Fig 77 —WENSLEYDALE LONGWOOL SHEARLING TUI

Winner of President's Medal for best Wensleydale Longwool Sheep, Melrose Show, 1936 Bred by  
and the property of Mr John Duggut, Burneside Hall, Kendal, Westmorland



Fig 78 —THREE SUFFOLK LAMBS.

Winners of President's Medal for best Pen of 1st Sheep, Melrose Show, 1936 Bred by and the  
property of Messrs Charles Blythe & Sons, Barberfield, Haddington



Fig. 79.—BRITISH ALPINE GOAT, "DUPPLIN GENISIA" BA 1099.

Winner of President's Medal for best animal in the Goat Classes, Melrose Show, 1936. Bred by and the property of Margaret, Lady Forteviot, Galloway House, Garlieston, Wigtownshire. Age three years and three months.



Fig 80.—LARGE WHITE SOW, "WHITTINGHAM HILDA 21st" 240,236.

Winner of President's Medal for best Large White Pig, Melrose Show, 1936. The property of Mr. John E. B. Cowper, Gogar Mains, Edinburgh. Bred by Whittingham Mental Hospital, Preston, Lancashire. Age three years and three months.

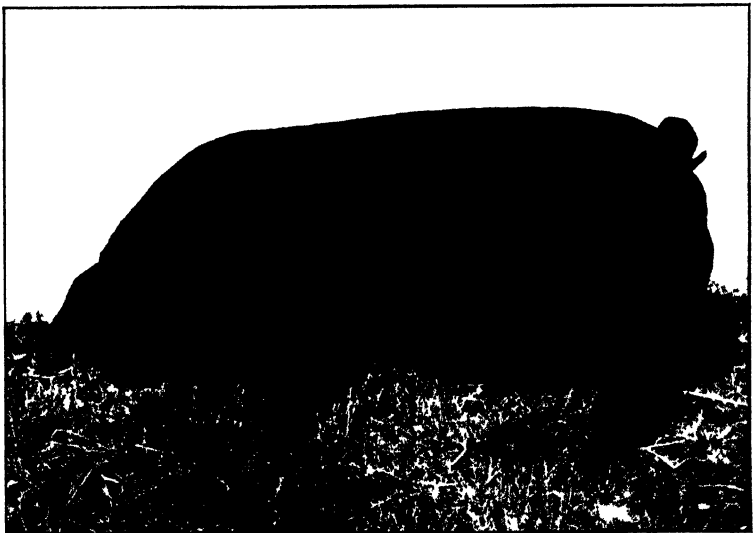


Fig. 81 —LARGE BLACK BOAR, "UPWOOD MONARCH 1st" P 87.

Winner of President's Medal for best Large Black Pig, Melrose Show, 1936. Bred by and the property of Mr E. A. Warth, Upwood Hill House, Ramsey, Huntingdon. Age five months.





# PREMIUMS AWARDED BY THE SOCIETY IN 1936.

## MELROSE SHOW.

*23rd, 24th, 25th, and 26th June 1936.*

ABBREVIATIONS.—V., *Very Highly Commended.* H., *Highly Commended.*  
C., *Commended.*

## CATTLE

### SHORTHORN.

#### *PRESIDENT'S CHAMPION MEDAL for best Shorthorn Animal.*

No. 4 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton  
Beverley" (256,591).

*Reserve*—No. 49 Stewart, Duncan M., Millhills, Crieff, "Millhills Roth's  
Queen 17th."

Paisley Perpetual Gold Challenge Cup, value £300, *for best Shorthorn  
Animal, "Extra Stock" eligible to compete.* This Cup, along with an  
endowment of £600, was provided from money collected in Paisley by  
the late Provost Muir M'Kean, and is in commemoration of the Society's  
first Show at Paisley in 1913.

No. 4 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton  
Beverley" (256,591).

*Reserve*—No. 49 Stewart, Duncan M., Millhills, Crieff, "Millhills Roth's  
Queen 17th."

The Duthie Perpetual Challenge Cup, value £150, *for best Animal in the  
Shorthorn Classes, "Extra Stock" eligible to compete.* This Cup was  
gifted by the late Mr William Duthie, Collynie.

No. 49 Stewart, Duncan M., Millhills, Crieff, "Millhills Roth's Queen  
17th."

Silver Cup, value £50, for the best Group of three animals in the Shorthorn Classes, consisting of one Bull and two Females, "Extra Stock" eligible to compete. Given by Mr William M'Nair Snadden of The Coldoch, Blair Drummond, Stirling.

Nos. 17, 34, 49 Stewart, Duncan M., Millhills, Crieff.

The Emilio R. Casares, jun., "Junior Memorial Champion Cup," value 50 guineas, for best Shorthorn Bull in Class 5, calved on or after 1st April of the year preceding the year of the Show, that has passed the tuberculin test. Given by Messrs J. Baird & Co. (Falkirk), Ltd., Bantaskin, Falkirk.

No. 25 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Captivator."

Reserve—No. 27 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Coldoch Ronald."

Best Shorthorn Bull in the Show, entered or eligible for entry in Coates's Herd-Book—£20, given by the Shorthorn Society.

No. 4 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Beverley" (256,591).

Silver Medal to the Breeder of the winner of above Prize—given by the Shorthorn Society.

No. 4 Marshall, Albert James, Bridgebank, Stranraer.

Breeder of best Bull of any age in Classes 1 to 5 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 12 Marshall, Albert James, Bridgebank, Stranraer.

**CLASS 1. BULL, born before 1st December 1933.—PREMIUMS,**  
£15, £10, £5, and £3.

1st No. 3 Piper, James, of The Grange, Burntisland, "Calrossie Rothes Baronet" (249,385).

2nd No. 1 Crawford and Balcarres, The Earl of, K.T., Balcarres House, Colinsburgh, Fife, "Crieffvechter Finance" (262,934).

3rd No. 2 Greig, D. G., of Eccles, Greenlaw, "Aldie Satisfaction" (254,851).

**EXTRA STOCK.**

The following was awarded the £10 Prize :—

No. 4 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Beverley" (256,591).

**CLASS 2. BULL, born on or after 1st December 1933, and before 1st April 1934.—PREMIUMS, £15, £10, £5, and £3.**

1st No. 5 Hill, R. Wylic, of Balthayock, Perth, "Calrossie Grand National" (268,893).

2nd No. 7 MacGillivray, K. P., Kirkton, Bunchrew, "Calrossie Grand Parade" (268,894).

3rd No. 6 MacGillivray, Finlay, Aldie, Tain, Ross-shire, "Calrossie Grand Slam" (268,895).

V No. 8 Mackenzie, John, Balnain, Conon Bridge, Ross-shire, "Balnain Banker" (261,722).

**CLASS 3.** BULL, born on or after 1st April 1934, and before 1st December 1934.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 9 Watherston, R. H., Crichton Mains, Ford, Midlothian, "Glenanne Benevolence" (270,569).

**CLASS 4.** BULL, born on or after 1st December 1934, and before 1st April 1935.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 12 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Borderer."  
 2nd No. 11 Mackenzie, John, Balnain, Conon Bridge, Ross-shire, "Balnain Leader."  
 3rd No. 17 Stewart, Duncan M., Millhills, Crieff, "Collynie Era."  
 4th No. 16 Smith, R. Laidlaw, Pittodrie, Pitcaple, "Pittodrie Victor Royal."  
 V No. 13 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Guide."  
 H No. 15 Platt, C. J. F., of Muirhouselaw, Maxton, St Boswells, "Collynie Royal Ranger" (269,375).

**CLASS 5.** BULL, born on or after 1st April 1935.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 25 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Captivator."  
 2nd No. 27 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Coldoch Ronald."  
 3rd No. 26 Robertson, Major William B., Colton, Dunfermline, "Scotston Rarity."  
 4th No. 22 Hill, R. Wylie, of Balthayock, Perth, "Balthayock Lucky Lad."  
 V No. 28 Stewart, Duncan M., Millhills, Crieff, "Coldoch Royal Robin."  
 H No. 24 Lee, Norman N. (Stonelands), Ltd., Stonelands, Arncliffe, Skipton-in-Craven, "Stonelands Pilot."  
 C No. 20 Barnes, Joseph, Barugh Syke, Wigton, Cumberland, "Barugh Bulwark."

*Best Shorthorn Female in the Show, entered or eligible for entry in Coates's Herd-Book*—£20, given by the Shorthorn Society.

- No. 49 Stewart, Duncan M., Millhills, Crieff, "Millhills Rothes Queen 17th."

*Silver Medal to the Breeder of the winner of above Prize*—given by the Shorthorn Society.

- No. 49 Stewart, Duncan M., Millhills, Crieff.

**CLASS 6.** COW, in Milk, born before 1st December 1932.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 30 Smith, R. Laidlaw, Pittodrie, Pitcaple, "Calrossie Blyth Pam" (130,739).  
 2nd No. 29 Platt, C. J. F., of Muirhouselaw, Maxton, St Boswells, "Yedingham Mina 8th" (125,289).

**EXTRA STOCK.**

The following was awarded the £10 Prize :—

- No. 31 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Calrossie Roan Flora" (130,764).

**CLASS 7.** COW, in Milk, born on or after 1st December 1932, and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 34 Stewart, Duncan M., Millhills, Crieff, "Uppermill Paula" (157,426).  
 2nd No. 33 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Aldie Rosemary" (160,049).  
 3rd No. 32 Crawford and Balcarres, The Earl of, K.T., Balcarres House, Colinsburgh, Fife, "Balcarres Jeanne" (156,704).

**CLASS 8.** COW or HEIFER, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 36 Smith, R. Laidlaw, Pittodrie, Pitcaple, Heifer, "Pittodrie Patricia" (172,492).  
 2nd No. 35 Crawford and Balcarres, The Earl of, K.T., Balcarres House, Colinsburgh, Fife, Cow, "Balcarres Edna" (166,410).

**CLASS 9.** HEIFER, born on or after 1st December 1934, and before 1st April 1935.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 43 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, "Sheila."  
 2nd No. 44 Stewart, Duncan M., Millhills, Crieff, "Fair Clipper 12th."  
 3rd No. 41 Robertson, Major William B., Colton, Dunfermline, "Scotston Clipper Fairy 3rd" (171,794).  
 4th No. 39 Greig, D. G., of Eccles, Greenlaw, Berwickshire, "Eccles Clara 19th."  
 V No. 42 Smith, R. Laidlaw, Pittodrie, Pitcaple, "Pittodrie Fairy Princess."  
 C No. 37 Fletcher, Captain A. M. Talbot, of Saltoun, Saltoun Hall, Pencaitland, "Saltoun Maude 9th."

**CLASS 10.** HEIFER, born on or after 1st April 1935.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 49 Stewart, Duncan M., Millhills, Crieff, "Millhills Roth's Queen 17th."  
 2nd No. 48 Piper, James, of The Grange, Burntisland, "Letham Roth's Queen 2nd."  
 3rd No. 46 Cameron, R. C., Greenlawdean, Greenlaw, "Greenlaw Alexandrina."

**DAIRY SHORTHORN.****PRESIDENT'S CHAMPION MEDAL**  
*for best Dairy Shorthorn Animal.*

No. 59 M'Gregor, Edward, Manor Farm, Lillington, Leamington Spa,  
Warwickshire, " Illington Duke 28th " (271,171).

*Reserve*—No. 58 Barnes, Joseph, Barugh Syke, Wigton, Cumberland,  
" Roseleaf's Gift " (239,956).

**CLASS 11. COW, in Milk, any age.—PREMIUMS,**  
£10, £5, and £3.

1st No. 51 Smith, Geoffrey R. H., Kidside, Milnthorpe, Westmorland,  
" Hothersall Waterloo 4th " (124,223).

2nd No. 52 Williams, J. A., Castle Hill, Pannal Ash, Harrogate, " Moor-  
park Daphne " (144,652).

**CLASS 12. COW, in Calf and not in Milk, any age.—**  
PREMIUMS, £10, £5, and £3.

1st No. 55 Jopson, Daniel, Ormathwaite Hall, Keswick, Cumberland,  
" Wild Eyes Beauty 10th " (153,534).

2nd No. 54 Barnes, Joseph, Barugh Syke, Wigton, Cumberland, " Gift's  
Surprise " (146,557).

3rd No. 50 Jopson, Daniel, Ormathwaite Hall, Keswick, Cumberland,  
" Barrington Wild Duchess 5th " (130,023).

**CLASS 13. COW, in Milk to first Calving, born in 1933.—**  
PREMIUMS, £10, £5, and £3.

1st No. 56 Barnes, Joseph, Barugh Syke, Wigton, Cumberland, " Clan-  
ville Butterfly 3rd " (158,575).

**CLASS 14. BULL, born in or before 1934.—PREMIUMS,**  
£10, £5, and £3.

1st No. 59 M'Gregor, Edward, Manor Farm, Lillington, Leamington Spa,  
Warwickshire, " Illington Duke 28th " (271,171).

2nd No. 58 Barnes, Joseph, Barugh Syke, Wigton, Cumberland, " Rose-  
leaf's Gift " (239,956).

**CLASS 15. BULL, born in 1935.—PREMIUMS,**  
£10, £5, and £3.

1st No. 62 Hewson, J., & Sons, Parton, Wigton, Cumberland, " Illington  
Clarence 3rd."

2nd No. 61 Barnes, Joseph, Barugh Syke, Wigton, Cumberland, " Barugh-  
Pilot."

3rd No. 64 Smith, Geoffrey R. H., Kidside, Milnthorpe, Westmorland,  
" Oxtan Barrington Duke 2nd."

V No. 65 Williams, J. A., Castle Hill, Pannal Ash, Harrogate, " Moor-  
park Oxford King."

H No. 63 M'Menemy, John J., Parkhouse Dairy Farm, Kinnesswood,  
Kinross, " Parkhouse Imperial Furbelow."

**ABERDEEN-ANGUS.****PRESIDENT'S CHAMPION MEDAL**  
*for best Aberdeen-Angus Animal.*

No. 115 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

*Reserve*—No. 113 Goodson, Captain A. L., Kilham, Mindrum, Northumberland, "Black Briar of Kilham" (96,606).

Silver Cup, value £50, *for best Group of Aberdeen-Angus Cattle, consisting of one Bull and two Females, "Extra Stock" not eligible to compete.*  
Given by Mr J. E. Kerr of Harviestoun, Dollar.

Nos. 99, 115, 137 Kerr, J. E., of Harviestoun, Dollar.

Ballindalloch Challenge Cup, value £50, *for the best Bull of any age in Classes 16 to 19.* Presented by the late Sir George Macpherson Grant, Bart.

No. 74 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Elver of Gallowhill" (87,177).

Silver Cup, value 50 guineas, *for best Aberdeen-Angus Bull born on or after 1st December 1933.* Given by Senor Eduardo Estanguet, Argentina.

No. 74 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Elver of Gallowhill" (87,177).

*Breeder of best Bull of any age in Classes 16 to 19 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 74 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland.

*Exhibitor of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

No. 74 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland.

*Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

*Not awarded.*

**CLASS 16. BULL, born before 1st December 1933.—**  
PREMIUMS, £15, £10, £5, and £3.

1st No. 71 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East Yorks., "Ecliptic of Southburn" (80,236).

2nd No. 67 Beddie, James, Banks, Strichen, "Gaffer Grierson" (74,029).

3rd No. 66 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Jellaba Eric" (84,640).

4th No. 73 Walker, Francis W., of Leys, Leys Castle, Inverness, "Primus of Lethen" (78,679).

V No. 68 Duff, James, Boghead, Glass, Huntly, "Palaskor" (85,147).

H No. 72 Templeton, T. & M., Sandyknowe, Kelso, "Jack Eric" (74,280).

C No. 69 Howison, A. W., Lochbank, Blairgowrie, "Dumas of Hatton" (80,135).

C No. 70 Moray Estates Development Co., Darnaway Estates Office, Forres, "Esquire of Ballindalloch" (80,674).

**CLASS 17.** BULL, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £15, £10, £5, and £3.

- 1st No. 74 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Elver of Gallowhill" (87,177).  
 2nd No. 81 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Elvendale of Gaidrew" (87,176).  
 3rd No. 78 Cran, James B., Morlich, Glenkindie, "Emperor of Bleaton" (87,212).  
 4th No. 87 Whyte, J. & J. L., Hayston, Glamis, "Exception of Peebles" (87,617).  
 V No. 85 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Dalmeny House, Edinburgh, "Jerkin of Bleaton" (88,160).  
 H No. 84 Reid, Andrew T., Auchterarder House, Auchterarder, "Enterprize of Gloagburn" (87,255).  
 C No. 80 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "Bundemar of Doonholm" (86,655).  
 C No. 83 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East Yorks., "Gruach" (87,961).

**CLASS 18.** BULL, born on or after 1st December 1934, and before 1st March 1935.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 94 Templeton, T. & M., Sandyknowe, Kelso, "Esplendor" (91,110).  
 2nd No. 93 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "El Katif of Doonholm" (90,826).  
 3rd No. 92 Grant, The Executors of the late Mrs Brewster, Thorn, Blairgowrie, "Eisloton of Bleaton" (90,720).  
 4th No. 89 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Evan of Gallowhill" (91,207).  
 V No. 91 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline, "Ervum of Harviestoun" (91,087).  
 H No. 88 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Elmont of Bywell" (90,845).  
 C No. 90 Duncan, Commander J. A., C.B., Parkhill, Arbroath, "Eang" (90,553).

**CLASS 19.** BULL, born on or after 1st March 1935.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 104 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Dalmeny House, Edinburgh, "Bemaster of Dalmeny" (89,935).  
 2nd No. 99 Kerr, J. E., of Harviestoun, Dollar, "Jew Eric" (91,899).  
 3rd No. 98 Forteviot, Lord, of Dupplin, Dupplin Castle, Perthshire, "Ericsson of Bleaton" (91,034).  
 4th No. 106 Sandeman, F. D. Stewart, The Laws, Kingennie, Angus, "Beacon of The Laws" (89,884).  
 V No. 105 Russell, G. H., of The Burn, Glenesk, Brechin, "Grekor of The Burn" (91,573).  
 H No. 102 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Ebon of Bleaton" (90,604).  
 C No. 95 Allan, John M., Easter Duthill, Carr Bridge, Inverness-shire, "Prince Perno of Duthill" (92,789).  
 C No. 96 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Magic of Bywell" (92,186).  
 C No. 97 Cunningham-Jardine, Mrs D. A. J., Jardine, Lockerbie, "Baron Burrel" (89,845).  
 C No. 100 Macbeth, W. Gilchrist, of Dunira, Comrie, "Eurova of Dunira" (91,181).  
 C No. 103 Murray, R. G., & Son, Spittal, Biggar, "Pompey of Dunira" (92,635).



Ballindalloch Challenge Cup, value £50, for the best Cow of any age in Classes 20 to 22. Presented by the late Sir John Macpherson Grant, Bart.

No. 115 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

*Exhibitor of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

No. 115 Kerr, J. E., of Harviestoun, Dollar.

*Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup*—The Silver Medal.

*Not awarded.*

Silver Cup, value £50, for the best Female Animal of the Aberdeen-Angus breed. "Extra Stock" eligible to compete. Presented by Mr Falconer L. Wallace of Candacraig, Strathdon.

No. 115 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

Champion Gold Medal, value £10, for best Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete. Given by the Aberdeen-Angus Cattle Society.

No. 115 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).

**CLASS 20.** COW, in Milk, born before 1st December 1932.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 115 Kerr, J. E., of Harviestoun, Dollar, "Julie Erica" (100,145).
- 2nd No. 113 Goodson, Captain A. L., Kilham, Mindrum, Northumberland, "Black Briar of Kilham" (96,606).
- 3rd No. 117 Marshall & Mitchell, Bleaton and Essendy, Blairgowrie, "Eyebright of Bleaton" (81,814).
- 4th No. 114 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "Muscatel of Doonholm" (97,050).
- V No. 118 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Dalmeny House, Edinburgh, "Echineva of Comrie" (87,503).
- H No. 109 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Enchantress of Gallowhill" (98,796).
- C No. 111 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline, "Black Elsie of Broomhall" (96,359).
- C No. 119 Ross-Taylor, J. P., Mungoswalls, Duns, "Mungos Ethereal" (94,857).

**CLASS 21.** COW, in Milk, born on or after 1st December 1932, and before 1st December 1933.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 126 Goodson, Captain A. L., Kilham, Mindrum, Northumberland, "Eulima 6th of Kilham" (102,652).
- 2nd No. 127 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, "Bryntirion of Doonholm" (103,049).
- 3rd No. 124 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, "Euxida 10th" (102,512).
- 4th No. 120 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Europa of Gallowhill" (101,751).
- V No. 122 Cochran, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Julia of Cults" (102,136).
- H No. 125 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, "Bunty of Doonholm" (103,050).
- C No. 128 Reid, Andrew T., Auchterarder House, Auchterarder, "Brahan Maid of Auchterarder" (103,853).

**CLASS 22.** COW or HEIFER, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 137 Kerr, J. E., of Harviestoun, Dollar, Heifer, "Ethera of Harviestoun" (106,102).  
 2nd No. 130 Beddie, James, Banks, Strichen, Heifer, "Gammer Ebenil" (104,726).  
 3rd No. 143 Russell, G. H., of The Burn, Glenesk, Brechin, Heifer, "Bubona of The Burn" (107,077).  
 4th No. 136 Jenkins, G. J., O.B.E., Mount Annan, Annan, Dumfriesshire, Heifer, "Averil Erica" (105,540).  
 V No. 138 Macbeth, W. Gilchrist, of Dunira, Comrie, Heifer, "Bonnie Maid 2nd of Dunira" (106,241).  
 H No. 131 Duncan, Commander J. A., C.B., Parkhill, Arbroath, Cow, "Eadailis" (105,344).  
 C No. 141 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Dalmeny House, Edinburgh, Heifer, "Ecila 2nd of Dalmeny" (107,035).  
 C No. 142 Ross-Taylor, J. P., Mungoswalls, Duns, Heifer, "Mungos Erema" (107,057).  
 C No. 133 Grant, Robert M'Vitie, Logie Home Farm, Dunphail, Forres, Heifer, "Beauty of Logie" (105,809).

**CLASS 23.** HEIFER, born on or after 1st December 1934, and before 1st March 1935.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 153 Forteviot, Lord, of Dupplin, Dupplin Castle, Perthshire, "Betty Black of Ballintomb" (107,702).  
 2nd No. 154 Goodson, Captain A. L., Kilham, Mindrum, Northumberland, "Brazen Maid of Kilham" (108,707).  
 3rd No. 145 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Euretta of Gallowhill" (107,785).  
 4th No. 166 Templeton, T. & M., Sandyknowe, Kelso, "Blossom 2nd of Sandyknowe" (110,524).  
 V No. 151 Findlay, Sir Edmund, Bart., Home Farm, Aberlour-on-Spey, "Perijata" (108,578).  
 H No. 165 Ross-Taylor, J. P., Mungoswalls, Duns, "Mungos Heather Blossom" (110,191).  
 C No. 168 Vint, Wyndham T., Terry's Farm, Ormside, Appleby, "Galahina" (108,460).  
 C No. 148 Cunningham-Jardine, Mrs D. A. J., Jardine, Lockerbie, "Rose P. of Ballintomb" (107,708).  
 C No. 156 Honeyman, R. Wemyss, Derculich, Strathtay, Perthshire, "Geranium of Derculich" (109,038).  
 C No. 144 Allendale, Viscount, Bywell, Stocksfield-on-Tyne, "Jubilee of Bywell" (107,734).

**CLASS 24.** HEIFER, born on or after 1st March 1935.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 174 Russell, G. H., of The Burn, Glenesk, Brechin, "Proud Balyra of The Burn," (110,209).  
 2nd No. 173 Reid, Andrew T., Auchterarder House, Auchterarder, "Proud Granada of Auchterarder" (110,056).  
 3rd No. 176 Vint, Wyndham T., Terry's Farm, Ormside, Appleby, "Black Beet of Sandyknowe."  
 4th No. 171 Beddie, James, Banks, Strichen, "Gammer Debenta" (107,825).  
 V No. 170 Beddie, James, Banks, Strichen, "Mystery Rose" (107,844).  
 H No. 175 Templeton, T. & M., Sandyknowe, Kelso, "Eldoma 2nd of Sandyknowe" (110,526).  
 C No. 169 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, "Euthalla of Gallowhill."

## GALLOWAY.

### *PRESIDENT'S CHAMPION MEDAL for best Galloway Animal.*

No. 180 Paterson, Robert Jardine, Balgray, Lockerbie, "Exclusive of Balgray" (19,107).

*Reserve*—No. 190 Anderson, James Scott, Tullichewan, Alexandria, Dumbartonshire, "Lavender 2nd of Crawfordton" (32,923).

Dr Gillespie Memorial Challenge Trophy, value £50, for best Galloway Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete. Presented by the Galloway Cattle Society of Great Britain and Ireland.

No. 180 Paterson, Robert Jardine, Balgray, Lockerbie, "Exclusive of Balgray" (19,107).

Silver Challenge Cup, value £50, for best Animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Challenge Trophy, "Extra Stock" eligible to compete. Presented by the Galloway Cattle Society to commemorate the Hundredth Show.

No. 190 Anderson, James Scott, Tullichewan, Alexandria, Dumbartonshire, "Lavender 2nd of Crawfordton" (32,923).

*Breeder of best Bull of any age in Classes 25 to 27 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 180 Paterson, Robert Jardine, Balgray, Lockerbie.

### **CLASS 25. BULL, born before 1st December 1933.—PREMIUMS,** £15, £10, £5, and £3.

1st No. 180 Paterson, Robert Jardine, Balgray, Lockerbie, "Exclusive of Balgray" (19,107).

2nd No. 181 Walker, Francis W., of Leys, Leys Castle, Inverness, "Kirklands Private" (19,006).

3rd No. 179 Biggar, Walter, Grange, Dalbeattie, "Grange Keynote" (17,647).

4th No. 178 Anderson, James Keith, Kirtleton, Waterbeck, Lockerbie, "Grange Marksman" (18,500).

V No. 177 Anderson, James Keith, Kirtleton, Waterbeck, Lockerbie, "War Blend 2nd of Whitehill" (17,874).

### **CLASS 26. BULL, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £15, £10, £5, and £3.**

1st No. 182 Duncan, Arthur Bryce, Gilchristland, Closeburn, Dumfriesshire, "Yeoman of Auchenhay" (19,423).

**CLASS 27. BULL, born on or after 1st December 1934.—PREMIUMS, £12, £8, £4, and £2.**

- 1st No. 185 Buchanan-Jardine, Sir John William, of Castle Milk, Bart., Castle Milk, Lockerbie, "Ideal of Castle Milk" (20,113).  
 2nd No. 183 Biggar, Walter, Grange, Dalbeattie, "Flashlight of Castle Milk" (20,114).  
 3rd No. 188 Little, D. & J., Whitehill, Corrie, Lockerbie, "Keystone of Wintershields" (20,000).  
 4th No. 187 Graham, Robert, Chapel of Logan, Canonbie, "Old Mill Prince" (19,946).  
 V No. 184 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfriesshire, "Avenger of Drumlanrig" (19,921).  
 H No. 186 Graham, Christopher E., Bogrie, Canonbie, "Milnholm Fascinator" (19,932).  
 C No. 189 Littlejohn, Quintin, Skaith, Newton Stewart, "Corbieton Adjutant" (19,877).

**CLASS 28. COW, in Milk, born before 1st December 1933.—PREMIUMS, £12, £8, £4, and £2.**

- 1st No. 190 Anderson, James Scott, Tullichevan, Alexandria, Dumbartonshire, "Lavender 2nd of Crawfordton" (32,923).  
 2nd No. 194 Graham, Robert, Chapel of Logan, Canonbie, "Logan Lady 33rd" (34,420).  
 3rd No. 193 Duncan, Arthur Bryce, Gilchristland, Closeburn, Dumfriesshire, "Kirtleton Bonnie Jean" (32,252).  
 4th No. 191 Buchanan-Jardine, Sir John William, of Castle Milk, Bart., Castle Milk, Lockerbie, "Dora of Castle Milk" (33,008).  
 V No. 195 Paterson, Robert Jardine, Balgray, Lockerbie, "Agnes 4th of Balgray" (34,485).  
 H No. 196 Sinclair, Lady, Knocknalling, Dalry, Castle Douglas, "Wayward Sure" (32,512).

**CLASS 29. COW or HEIFER, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 208 Graham, Robert, Chapel of Logan, Canonbie, Heifer, "Logan Lady 42nd" (36,546).  
 2nd No. 210 Little, D. & J., Whitehill, Corrie, Lockerbie, Heifer, "Lady Rose of Whitehill" (36,678).  
 3rd No. 212 Paterson, Robert Jardine, Balgray, Lockerbie, Heifer, "Florence of Balgray" (36,617).  
 4th No. 209 Kennedy-Moffat, W., Auchencheyne, Moniaive, Dumfriesshire, Heifer, "Lena 2nd of Lochurr" (36,632).  
 V No. 198 Anderson, James Keith, Kirtleton, Waterbeck, Lockerbie, Heifer, "Culmark Queen 5th" (36,478).  
 H No. 206 Gourlay Farming Co., The Ford, Tynron, Dumfriesshire, Heifer, "Flowerdale of Kirkland" (36,531).  
 C No. 203 Duncan, Arthur Bryce, Gilchristland, Closeburn, Dumfriesshire, Heifer, "Favoured of Gilchristland" (36,413).  
 C No. 213 Sinclair, Lady, Knocknalling, Dalry, Castle Douglas, Heifer, "Fortuna of Blawquhairn" (36,884).  
 C No. 201 Buchanan-Jardine, Sir John William, of Castle Milk, Bart., Castle Milk, Lockerbie, Heifer, "Lilac 3rd of Castle Milk" (36,611).  
 C No. 197 Anderson, James Keith, Kirtleton, Waterbeck, Lockerbie, Heifer, "Kirtleton June" (36,235).

**CLASS 30. HEIFER, born on or after 1st December 1934.—**  
**PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 234 Sinclair, Lady, Knocknalling, Dalry, Castle Douglas,  
 "Gerontia of Blawquhairn" (37,698).  
 2nd No. 219 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
 Castle Milk, Lockerbie, "Lily of Castle Milk" (37,381).  
 3rd No. 225 Gourlay Farming Co., The Ford, Tynron, Dumfriesshire,  
 "Flirt 5th of Kirkland" (37,288).  
 4th No. 221 Carruthers, Lieut.-Colonel F. J., of Dormont, Lockerbie,  
 "Elsie of Dormont" (37,090).  
 V No. 218 Buccleuch Estates, Ltd., Holestane, Thornhill, Dumfries-  
 shire, "Pastelle of Drumlanrig" (37,055).  
 H No. 227 Gourlay Farming Co., The Ford, Tynron, Dumfriesshire,  
 "Favourite 7th of Kirkland" (37,302).  
 C No. 220 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
 Castle Milk, Lockerbie, "Baroness of Castle Milk"  
 (37,383).  
 C No. 224 Duncan, Arthur Bryce, Gilchristland, Closeburn, Dumfries-  
 shire, "Petunia 2nd of Gilchristland" (37,186).  
 C No. 217 Buccleuch Estates, Ltd., Holestane, Thornhill, Dumfries-  
 shire, "Polly of Drumlanrig" (37,051).  
 C No. 223 Duncan, Arthur Bryce, Gilchristland, Closeburn, Dumfries-  
 shire, "Ruby of Gilchristland" (37,178).

**BELTED GALLOWAY.**

**PRESIDENT'S CHAMPION MEDAL**  
*for best Belted Galloway Animal.*

- No. 238 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway,  
 "Gartmore Charles" (701 B).

*Reserve*—No. 237 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates  
 Office, Gartmore, Perthshire, "Gartmore Peter" (1033 B).

Knockbrex Challenge Cup, value £50, for the best Belted Galloway Animal,  
 "Extra Stock" eligible to compete. This Cup was presented by Mrs  
 Brown, Kirkbrex, Glasgow, for the best Belted Galloway animal  
 registered in the Dun and Belted Galloway Cattle Breeders' Association  
 Herd-Book, entered in any of the breeding classes, at the Show at  
 which it may be competed for.

- No. 238 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway,  
 "Gartmore Charles" (701 B).

The Ian Hamilton Silver Challenge Cup, value £50, for the best Belled Galloway Animal of the sex opposite to that of the winner of the Knockbrex Challenge Cup, "Extra Stock" eligible to compete. The winning animal to be registered or eligible for registration in the Dun and Belled Galloway Herd-Book. This Cup was presented by General Sir Ian Hamilton, G.C.B.

No. 251 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Helen II." (3328 B).

*Breeder of Best Bull in Classes 31 and 32 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 237 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire.

**CLASS 31. BULL, born before 1st December 1934.—**

PREMIUMS, £10, £5, £3, and £2.

- 1st No. 237 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Peter" (1033 B).
- 2nd No. 235 Bell-Irving, The Representatives of the late J. J., Makerstoun, Kelso, "Mochrum Pioneer of Craigeach" (1037 B).
- 3rd No. 236 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Mark Andy" (1067 B).

**EXTRA STOCK.**

The following was awarded the £10 Prize :—

No. 238 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, "Gartmore Charles" (701 B).

**CLASS 32. BULL, born on or after 1st December 1934.—**

PREMIUMS, £10, £5, £3, and £2.

- 1st No. 241 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Jim" (1109 B).
- 2nd No. 239 Bell-Irving, The Representatives of the late J. J., Makerstoun, Kelso, "Makerstoun Olly II." (1133 B).
- 3rd No. 240 Brown, J. Douglas, Corseyard, Kirkcudbright, "Knockbrex Merlin" (1107 B).

**CLASS 33. COW or HEIFER, born before 1st December 1933, in Milk or in Calf ; if in calf and not in milk, to calve on or before 1st December of the year of the Show.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 246 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, Cow, "Gartmore Doreen II." (2056 B).
- 2nd No. 247 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, Cow, "Gartmore Edith I." (3058 B).
- 3rd No. 245 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, Cow, "Shenley Barbara" (1682 B).
- 4th No. 244 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, Cow, "Gartmore Grace III." (1032 B).
- V No. 243 Brown, J. Douglas, Corseyard, Kirkcudbright, Cow, "Knockbrex Ixia" (2218 B).
- H No. 242 Bell-Irving, The Representatives of the late J. J., Makerstoun, Kelso, "Makerstoun Florence" (1378 B).

**CLASS 34. HEIFER, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 251 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Helen II." (3328 B).  
 2nd No. 249 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Etty" (3418 B).  
 3rd No. 248 Brown, J. Douglas, Corseyard, Kirkcudbright, "Knockbrex Lavender" (3350 B).  
 4th No. 250 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Christian IV." (3318 B).

**CLASS 35. HEIFER, born on or after 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 256 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Winifred VI." (3462 B).  
 2nd No. 253 Brown, J. Douglas, Corseyard, Kirkcudbright, "Knockbrex Mavis" (3432 B).  
 3rd No. 257 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Perthshire, "Gartmore Mary VIII." (3460 B).  
 4th No. 254 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Dainty" (3586 B).  
 V No. 258 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, "Boreland Kate" (3592 B).  
 H No. 255 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, "Lullenden Dolly II." (3588 B).  
 C No. 252 Bell-Irving, The Representatives of the late J. J., Makerstoun, Kelso, "Makerstoun Biddy" (3594 B).

## HIGHLAND.

**PRESIDENT'S CHAMPION MEDAL**  
*for best Highland Animal.*

- No. 275 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Baravalla Smiorail II. of Killundine" (10,636).

- Reserve*—No. 265 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Merneal of Killundine" (3844).

Perpetual Victory Challenge Cup, approximate value 50 Guineas, *for the best Animal in the Male Classes, "Extra Stock" eligible to compete.*  
 Given by the Highland Cattle Society of Scotland.

- No. 265 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Merneal of Killundine" (3844).

*Breeder of best Bull in Classes 36 to 38 ("Extra Stock" not eligible to compete)*  
—The Silver Medal.

No. 265 Lees-Milne, Mrs, of Killundine, Drimnin, Oban.

**CLASS 36.** BULL, born before 1st December 1933.—  
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 260 Walker, Francis W., of Leys, Leys Castle, Inverness, "Duke of Leys" (3757).  
2nd No. 259 Southesk, The Earl of, Kinnaird Castle, Brechin, "Ceatharnach of Southesk" (3780).

**CLASS 37.** BULL, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £15, £10, £5, and £3.

*Not forward.*

**CLASS 38.** BULL, born on or after 1st December 1934.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 265 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Merneal of Killundine" (3844).  
2nd No. 267 Walker, William, Avongrange, Hamilton, and Foreland, Isle of Islay, "An Morair of Killundine" (3843).  
3rd No. 262 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, "An-Ceatharnach of Barbreck" (3840).  
4th No. 268 Walker, William, Avongrange, Hamilton, and Foreland, Isle of Islay, "Raonull of Killeen" (3857).  
V No. 263 Dunlop, Miss, of Shieldhill, Biggar, "An Proiseil Riabhach of Quothquan" (3852).  
H No. 266 Thomson, Misses S. W. & B. L., of Glenpark, Balerno, Midlothian, "Whaup of Glendarroch" (3864).

Perpetual Victory Challenge Cup, approximate value 35 Guineas, for the best Animal in the Female Classes, "Extra Stock" eligible to compete.  
Given by the Highland Cattle Society of Scotland.

No. 275 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, "Baravalla Smiorail II. of Killundine" (10,636).

**CLASS 39.** COW, of any age, with Calf at foot.—  
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 272 Walker, Francis W., of Leys, Leys Castle, Inverness, "Una IV. of Flichity" (10,443).  
2nd No. 271 Southesk, The Earl of, Kinnaird Castle, Brechin, "Lady Mairi II." (10,722).  
3rd No. 269 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, "Cruinneag of Ensay" (10,616).



**CLASS 40.** HEIFER, born on or after 1st December 1932, and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 275 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, " Baravalla Smiorail II. of Killundine " (10,636).  
 2nd No. 273 Home, The Earl of, K.T., Douglas Castle, Lanark, " Proisaig Dubh " (10,706).  
 3rd No. 274 Home, The Earl of, K.T., Douglas Castle, Lanark, " Baravalla Milis " (10,707).  
 4th No. 278 Walker, Francis W., of Leys, Leys Castle, Inverness, " Princess of Leys " (10,658).  
 V No. 276 Southesk, The Earl of, Kinnaird Castle, Brechin, " Ban-Bharran of Southesk " (10,724).  
 H No. 277 Thomson, Misses S. W. & B. L., Glenpark, Balerno, Midlothian, " Princess Ruadh II. of Achnacloich " (10,718).  
 C No. 279 Walker, William, Avongrange, Hamilton, and Foreland, Isle of Islay, " Miarad Bhuidhe of Foreland " (10,956).

**CLASS 41.** HEIFER, born on or after 1st December 1933, and before 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 283 Dunlop, Miss, of Shieldhill, Biggar, " Sidonia of Quothquan " (10,806).  
 2nd No. 284 Dunlop, Miss, of Shieldhill, Biggar, " Maireared of Quothquan " (10,805).  
 3rd No. 288 Southesk, The Earl of, Kinnaird Castle, Brechin, " Cassandra " (11,013).  
 4th No. 286 Home, The Earl of, K.T., Douglas Castle, Lanark, " Measarra Og " (10,853).  
 V No. 285 Home, The Earl of, K.T., Douglas Castle, Lanark, " Proisaig Ruadh " (10,850).  
 H No. 287 Lees-Milne, Mrs, of Killundine, Drimnin, Oban, " Una Bhuidhe V. of Killundine " (10,818).  
 C No. 280 Brown, Mrs G. M., Ichrachan, Taynult, " Barbara Ruadh " (10,859).

**CLASS 42.** HEIFER, born on or after 1st December 1934.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 291 Dunlop, Miss, of Shieldhill, Biggar, " Laochag III. of Quothquan " (10,907).  
 2nd No. 290 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, " Lady Bhuidhe of Barbreck " (10,977).  
 3rd No. 295 Thomson, Misses S. W. & B. L., of Glenpark, Balerno, Midlothian, " Kip of Glendarroch " (10,922).  
 4th No. 293 Home, The Earl of, K.T., Douglas Castle, Lanark, " Mairi Ban Righ " (11,014).  
 V No. 292 Home, The Earl of, K.T., Douglas Castle, Lanark, " Proisaig-a-Rithist " (11,015).  
 H No. 294 Thomson, Misses S. W. & B. L., of Glenpark, Balerno, Midlothian, " Cairn of Glendarroch " (10,923).

**AYRSHIRE.****CONDITIONS.**

To be eligible for competition in the Ayrshire Section cows must have an authenticated milk yield, and younger females (including cows which have not completed their first lactation) and bulls an authenticated milking pedigree, of a definite minimum amount.

The minimum amount referred to shall be as follows, calculated on the basis of a period between calvings of 52 weeks, and 3.8 per cent of butter fat :—

(a) Cows which have completed two or more lactations—700 gallons.

(b) Cows which have completed only one lactation—600 gallons.

(c) Younger females and bulls—an authenticated milking pedigree for dam and dam of sire on a similar basis.

In the case of cows with two or more lactations the record lodged may be that for any year the Exhibitor may select.

*PRESIDENT'S CHAMPION MEDAL  
for best Ayrshire Animal.*

No. 322 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Logan Mains Mary 2nd" (A 9665).

*Reserve*—No. 304 M'Alister, James, Meikle Kilmory Farm, Rothesay, "Meikle Kilmory Moss Rose 10th" (30,069).

Cowhill Champion Cup, approximate value £30, *for best Animal of the Ayrshire breed, entered with a number in the Herd-Book.* Presented by the late Major Henry Keswick, Cowhill Tower, Dumfries, to the Ayrshire Cattle Herd-Book Society, to be competed for annually at the Shows of the Highland and Agricultural Society of Scotland. Messrs James Howie & Sons, Muirside, Dumfries, who won this Cup outright in 1934, have kindly re-presented the Cup to the Society for competition on the same conditions as formerly.

No. 322 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Logan Mains Mary-2nd" (A 9665).

Special Prize of £10 *for the best Female Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1936. "Extra Stock" eligible to compete.* Given by the Ayrshire Cattle Herd-Book Society.

No. 322 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Logan Mains Mary 2nd" (A 9665).

**CLASS 43.** COW, in Milk, born before 1933.—PREMIUMS,  
£12, £8, £4, and £2.

- 1st No. 304 M'Alister, James, Meikle Kilmory Farm, Rothesay, "Meikle Kilmory Moss Rose 10th" (30,069).  
 2nd No. 299 Craig, John, Bankend, Dunlop, "Cauldhame White Lily 3rd" (47,351).  
 3rd No. 297 Clark, John, Dunrod Farm, Inverkip, "Dunrod Elf 3rd" (47,402).  
 4th No. 313 Blair, William C., Dykehead Farm, Carmunnock, "Dykehead White Bud" (53,414).  
 V No. 306 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Wemyss Marguerite" (34,402).  
 H No. 301 Ferguson, William L., East Cairnweil, Stranraer, "Cairnweil Miss Spence 2nd" (38,705).

**CLASS 44.** COW, in Milk, born on or after 1st January 1933.—  
PREMIUMS, £10, £7, £3, and £2.

- 1st No. 307 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 5th" (48,174).  
 2nd No. 324 Blair, William C., Dykehead Farm, Carmunnock, "Dykehead Lapwing."  
 3rd No. 308 Dalziel, Robert, Rue, Holywood, Auldirth, "Rue Wallflower 2nd" (59,715).  
 4th No. 327 Howie, James, & Sons, Muirside, Dumfries, "Howie's Iona 2nd" (58,236).

**CLASS 45.** COW, of any age, in Calf, and due to calve before 1st December of the year of the Show.—PREMIUMS, £10, £7, £3, and £2.

- 1st No. 322 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Logan Mains Mary 2nd" (A 9665).  
 2nd No. 303 Howie, James, & Sons, Muirside, Dumfries, "Howie's Dairy Lass 3rd" (44,126).  
 3rd No. 317 Ferguson, William L., East Cairnweil, Stranraer, "Cairnweil Brownie 2nd" (38,685).  
 4th No. 318 Mackay, Robert, Bruchag, Rothesay, "Bruchag Princess" (53,798).  
 V No. 321 Rowallan, Lord, Rowallan, Kilmarnock, "Rowallan Tilda 10th" (31,836).  
 H No. 314 Butter, Colonel C. A. J., Cluniemore Home Farm, Pitlochry, "Cluniemore Dignity" (46,846).  
 C No. 296 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 4th" (47,411).

**CLASS 46.** HEIFER, born on or after 1st June 1933, in Calf, and due to calve before 1st December of the year of the Show.—PREMIUMS,  
£10, £7, £3, and £2.

- 1st No. 326 Clark, John, Dunrod Farm, Inverkip, "Dunrod Snowflake 6th" (60,759).  
 2nd No. 323 Ardgowan Estates, Ltd., Ardgowan, Inverkip, "Ardgowan Etta" (56,307).  
 3rd No. 325 Clark, John, Dunrod Farm, Inverkip, "Dunrod Honey-suckle 3rd" (60,744).  
 4th No. 329 Logan, W. & J., Burton Farm, Ayr, "Burton Heather" (57,057).

- V No. 331 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Lessnessock Blue Legs" (55,824).  
 H No. 330 Mackay, Robert, Bruchag, Rothesay, "Bruchag Lady Alice 4th" (58,156).  
 C No. 332 Rowallan, Lord, Rowallan, Kilmarnock, "Rowallan Bess 12th" (59,052).  
 C No. 335 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Wemyss Nellie."

**CLASS 47. HEIFER, born in 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 339 M'Ilwraith, G. A., Stannock, Isle of Whithorn, Newton Stewart, "Stannock White Queenie" (57,966).  
 2nd No. 338 Logan, W. & J., Burton Farm, Ayr, "Burton Rosie" (69,131).  
 3rd No. 340 Rowallan, Lord, Rowallan, Kilmarnock, "Rowallan Sally 2nd" (59,058).  
 4th No. 336 Ardgowan Estates, Ltd., Ardgowan, Inverkip, "Ardgowan Gazette" (64,121).

**CLASS 48. HEIFER, born in 1935.—PREMIUMS, £8, £5, £3, and £2.**

- 1st No. 346 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Lessnessock Red Rose 10th" (64,548).  
 2nd No. 344 Cochran, Alexander, Nether Craig, Kilmarnock, "Killoch Totina 3rd."  
 3rd No. 347 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Westburn Nancy 4th" (64,578).  
 4th No. 349 Rowallan, Lord, Rowallan, Kilmarnock, "Rowallan Tilda 27th" (69,145).  
 V No. 342 Ardgowan Estates, Ltd., Ardgowan, Inverkip, "Ardgowan Charm" (64,113).  
 H No. 343 Barr, Allan, Hobsland, Monkton, "Hobsland Peerie 14th" (63,785).  
 C No. 345 Cockburn Farm Co., Cockburn, Balerno, Midlothian, "Cockburn Maisie" (65,563).

*Breeder of best Bull of any age in Classes 49 to 51 ("Extra Stock" not eligible to compete)—The Silver Medal.*

No. 352 County of Lanark, Hairmyres Colony, East Kilbride.

*Special Prize of £10 for the best Male Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1936. "Extra Stock" eligible to compete. Given by the Ayrshire Cattle Herd-Book Society.*

No. 352 Fleming, William, Auldton, Ashgill, Dalserf, Lanarkshire, "Hairmyres Milkboy" (32,207).

**CLASS 49. BULL, born before 1934.—PREMIUMS, £12, £8, £4, and £2.**

- 1st No. 352 Fleming, William, Auldton, Ashgill, Dalserf, Lanarkshire, "Hairmyres Milkboy" (32,207).  
 2nd No. 350 Caldwell, David, & Sons, Pennyfadzeoch, Ochiltree, Cumnock, "Howie's Expectation" (32,886).  
 3rd No. 351 Dalziel, Robert, Rue, Holywood, Auldgirth, "Rue Flash Boy" (34,175).  
 4th No. 353 Lawrie, Arthur, Kessington, Bearsden, "Midtown Rear Admiral" (32,988).

**CLASS 50.** Bull, born in 1934.—PREMIUMS, £10, £7, £3, and £2.

- 1st No. 357 Logan, W. & J., Burton Farm, Ayr, "Sandhill Perfect Print" (34,584).  
 2nd No. 356 Howie, James, & Sons, Muirside, Dumfries, "Barboigh Raider" (35,329).

**CLASS 51.** BULL, born in 1935.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 359 Barr, Allan, Hobsland, Monkton, "Hobsland Fashion Plate" (35,752).  
 2nd No. 360 M'Ilwraith, G. A., Stannock, Isle of Whithorn, Newton Stewart, "Stannock Expectation" (36,177).

## BRITISH FRIESIAN.

### *PRESIDENT'S CHAMPION MEDAL for best British Friesian Animal.*

- No. 399 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside (imported 1936) Lodewijk Bertus 7th" (45,841).

*Reserve*—No. 405 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Benachie" (43,835).

Edinburgh Corporation Perpetual Gold Challenge Cup *for best British Friesian animal. "Extra Stock" eligible to compete.* This Cup was presented by the City of Edinburgh to commemorate the Society's Hundredth Show.

- No. 399 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside (imported 1936) Lodewijk Bertus 7th" (45,841).

*Reserve*—No. 405 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Benachie" (43,835).

The MacRobert Champion Silver Bell, value 50 Guineas, *for the best Animal in the British Friesian Classes, registered in or eligible for entry in the British Friesian Cattle Society's Herd-Book. "Extra Stock" eligible to compete.* Presented by Lady Rachel Workman MacRobert, Douneside, Tarland.

- No. 399 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside (imported 1936) Lodewijk Bertus 7th" (45,841).

Silver Challenge Cup, value 50 Guineas, for the best Group of three animals.  
*"Extra Stock" eligible to compete.* Given by the British Friesian Cattle Society.

Nos. 384, 399, 405 MacRobert, Trustees of Sir Alasdair W., Bart., Doune-side Home Farm, Tarland, Aberdeenshire.

Champion Prize of £5 given by the British Friesian Cattle Society for the best Female Animal exhibited. *"Extra Stock" eligible to compete.*

No. 363 Gladstone, T. E., Margery Flatts, Lanchester, Co. Durham,  
*"Dignit Glossy" (155,658).*

**CLASS 52.** COW, in Milk, born in or before 1932.—PREMIUMS,  
 £12, £8, £4, and £2.

- 1st No. 363 Gladstone, T. E., Margery Flatts, Lanchester, Co. Durham,  
*"Dignit Glossy" (155,658).*  
 2nd No. 367 Weightman, Albert, Middle Herrington Farm, Sunderland,  
*"Herrington Ketchup" (147,632).*  
 3rd No. 364 Gladstone, T. E., Margery Flatts, Lanchester, Co. Durham,  
*"Dignit Lass" (166,344).*

**CLASS 53.** COW, in Calf, and not in Milk, born in or before 1932.—  
 PREMIUMS, £10, £5, £3, and £2.

- 1st No. 372 Weightman, Albert, Middle Herrington Farm, Sunderland,  
*"Herrington Melody" (168,332).*  
 2nd No. 366 Pathhead & Sinclairtown Reform Co-operative Society, Ltd.,  
 102 Commercial Street, Kirkcaldy, *"Ranfurly Coll" (120,582).*  
 3rd No. 369 Gladstone, T. E., Margery Flatts, Lanchester, Co. Durham,  
*"Dignit Lovely Lass" (135,918).*  
 4th No. 371 Weightman, Albert, Middle Herrington Farm, Sunderland,  
*"Herrington Maureen" (168,326).*  
 V No. 370 Kilpatrick, James, Craigie Mains, Kilmarnock, *"Craigie-mains Chosen" (145,393 R.M.).*

**EXTRA STOCK.**

*Not forward.*

**CLASS 54.** COW, in Milk, born in 1933 or 1934.—PREMIUMS,  
 £10, £5, £3, and £2.

- 1st No. 376 Weightman, Albert, Middle Herrington Farm, Sunderland,  
*"Herrington Naressa" (179,298).*  
 2nd No. 375 M'Nair, Samuel, Merrymouth Farm, Dunlop, Ayrshire,  
*"Moy Coif" (181,326).*

**CLASS 55. HEIFER, born in 1934.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 384 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Petunia" (188,474).
- 2nd No. 383 Innes, James C., Duncroft, Gartly, Aberdeenshire, "Donside Osprey" (188,424).
- 3rd No. 386 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Olive" (190,270).
- 4th No. 380 Christison, John, Crossveggate, Milngavie, "Crossveggate Dairymaid" (187,914).
- V No. 378 Brewster, David, Shawhead, Coatbridge, "Hatrick Mary Brown 3rd" (190,098).
- H No. 385 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Elma 2nd" (188,454).
- C No. 381 Glentanan, Lord, Glen Tanar, Aboyne, "Glentanan Burella" (189,494 P.I.).
- C No. 382 Glentanan, Lord, Glen Tanar, Aboyne, "Glentanan Joulika" (189,502 P.I.).

**CLASS 56. HEIFER, born in 1935, before 1st July.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 394 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Princess Hatsumer" (201,724).
- 2nd No. 393 Pathhead & Sinclairtown Reform Co-operative Society, Ltd., 102 Commercial Street, Kirkcaldy, "Abden Hazel" (196,284).
- 3rd No. 389 M'Nair, Samuel, Merrymouth Farm, Dunlop, Ayrshire, "Moy Edna" (203,786).
- 4th No. 391 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Marina" (199,820).
- V No. 387 Christison, John, Crossveggate, Milngavie, "Crossveggate Bessie 3rd" (199,278).
- H No. 388 Glentanan, Lord, Glen Tanar, Aboyne, "Glentanan Quellectra" (200,936).
- C No. 392 Mitchell, David, Blackdykes, North Berwick, "Berwick Dainty" (197,118).

**CLASS 57. HEIFER, born in 1935, on or after 1st July.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 396 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Fiona 2nd" (199,806).
- 2nd No. 395 Kilpatrick, James, Craigie Mains, Kilmarnock, "Craigie-mains Annette" (199,096).
- 3rd No. 397 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Paulette" (201,690).

*Breeder of Best Bull of any age in Classes 58 to 60 ("Extra Stock" not eligible to compete)—The Silver Medal.*

No. 399 F. A. Bijlsma, Jelsum, Friesland, Holland.

*Champion Prize of £5 given by the British Friesian Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.*

No. 399 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside (imported 1936) Lodewijk Bertus 7th" (45,841).

**CLASS 58.** BULL, born in or before 1933.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 399 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside (imported 1936) Lodewijk Bertus 7th" (45,841).  
 2nd No. 398 Christison, John, Crossveggate, Milngavie, "Clifford-chambers Iliad" (40,217).  
 3rd No. 400 Moffitt, John E., Peepy, Stocksfield-on-Tyne, Northumberland, "Terling Coloradus" (41,331 P.I., R.M.P.).  
 4th No. 401 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington Lingman" (39,149 R.M.P.).

**EXTRA STOCK.**

The following was awarded the £5 Prize :—

- No. 402 M'Ilchere, Malcolm, Cartside Farm, Thorntonhall, Lanarkshire, "Kintyre Thorn" (36,047).

**CLASS 59.** BULL, born in 1934.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 405 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Ben-achie" (43,835).  
 2nd No. 406 Pathhead & Sinclairtown Reform Co-operative Society, Ltd., 102 Commercial Street, Kirkcaldy, "Loirston King 2nd" (44,317).  
 3rd No. 404 M'Ilchere, Malcolm, Cartside Farm, Thorntonhall, Lanarkshire, "Kintyre Ben" (44,241).  
 4th No. 403 Glentanar, Lord, Glen Tanar, Aboyne, "Dennistoun Meir-inga" (43,791).  
 V No. 408 Shipman, W. S., Burdon Farm, Sunderland, "Herrington Oyama" (44,169).

**CLASS 60.** BULL, born in 1935.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 410 Weightman, Albert, Middle Herrington Farm, Sunderland, "Herrington (imported 1936) Leo" (46,237).  
 2nd No. 409 MacRobert, Trustees of Sir Alasdair W., Bart., Douneside Home Farm, Tarland, Aberdeenshire, "Douneside Evan 3rd" (45,837).

**DAIRY COWS.***Special Prizes for Dairy Cows.*

COWS from Attested Herds and from Grade "A" (Tuberculin Tested) or Certified Herds, drawn from Classes 33, 43, 44, 45, 52, 53, and 54.—PREMIUMS, £10, £5, and £3.

- 1st No. 322 Wemyss, Lady Victoria, Wemyss Castle Home Farm, Wemyss Castle, East Wemyss, "Logan Mains Mary 2nd" (A 9665).  
 2nd No. 303 Howie, James, & Sons, Muirside, Dumfries, "Howie's Dairy Lass 3rd" (44,126).  
 3rd No. 307 Clark, John, Dunrod Farm, Inverkip, "Dunrod Susan 5th" (48,174).



# HORSES

## CLYDESDALE STALLION AND COLT.

### *PRESIDENT'S CHAMPION MEDAL for best Clydesdale Stallion or Colt.*

No. 415 Templeton, T. & M., Sandyknowe, Kelso, "Beneficial" (22,074).  
*Reserve*—No. 435 Clark, James, Windlaw, Carmunnock, "Windlaw Aristocrat."

Cawdor Challenge Cup, value 50 Guineas, *for best Clydesdale Stallion or Colt, "Extra Stock" eligible to compete.* This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland.

No. 435 Clark, James, Windlaw, Carmunnock, "Windlaw Aristocrat."

*Breeder of best Male Animal of any age in Classes 61 to 64 ("Extra Stock" not eligible to compete)*—The Silver Medal.

No. 415 Wilson, Robert A., Kirkholm, Ballantrae.

### **CLASS 61. STALLION, born before 1933.—PREMIUMS,** £20, £15, £10, and £4.

- 1st No. 415 Templeton, T & M., Sandyknowe, Kelso, "Beneficial" (22,074).
- 2nd No. 412 Gemmell, James, North Bankend, Coalburn, Lanarkshire, "Craignethan" (22,106).
- 3rd No. 414 Templeton, T. & M., Sandyknowe, Kelso, "Vanguard" (22,201).

### **CLASS 62. ENTIRE COLT, born in 1933.—PREMIUMS,** £20, £15, £10, and £4.

- 1st No. 417 Adams, David, Auchencraig, Dumbarton, "His Majesty" (22,481).
- 2nd No. 418 Clark, Allan, Woodbank, Windygates, Fife, "Woodbank Duplex" (22,546).

### **CLASS 63. ENTIRE COLT, born in 1934.—PREMIUMS,** £20, £15, £10, and £4.

- 1st No. 425 Kilpatrick, James, Hawkrigg House, Wigton, Cumberland, "Hawkrigg Choice" (22,697).
- 2nd No. 427 Sharp, T. Mercer, Bardrill, Blackford, "Bardrill Royal Duke" (22,594).
- 3rd No. 420 Clark, Allan, Woodbank, Windygates, Fife, "Woodbank Magnificent" (22,799).
- 4th No. 421 Elliot, F. & C., Nisbet Hill, Duns, "Strathore Chief" (22,772).
- V No. 429 Templeton, T. & M., Sandyknowe, Kelso, "Battlement" (22,599).
- H No. 426 Murdoch, Henry, Balgreen, Hollybush, Ayrshire, "Balgreen Autocrat" (22,582).

**CLASS 64. ENTIRE COLT, born in 1935.—PREMIUMS,**  
*£15, £9, £6, and £4.*

- 1st No. 435 Clark, James, Windlaw, Carmunnock, "Windlaw Aristocrat."  
 2nd No. 431 Armstrong, J. A., The Beeches, Tarraby, Carlisle, "Balgeen Select."  
 3rd No. 443 Templeton, T. & M., Sandyknowe, Kelso.  
 4th No. 441 Murdoch, Henry, Balgreen, Hollybush, Ayrshire, "Balgreen Pre-eminence."  
 V No. 434 Clark, Allan, Woodbank, Windygates, Fife.  
 H No. 442 Templeton, T. & M., Sandyknowe, Kelso.  
 C No. 432 Brown, Miss A. L. W., Muirhouse, Stow, Midlothian, "Landsmen."  
 C No. 437 Elliot, F. & C., Nisbet Hill, Duns, "Royal Highness."

**CLYDESDALE GELDING.**

Got by a Registered Clydesdale Stallion.

**PRESIDENT'S CHAMPION MEDAL**  
*for best Clydesdale Gelding.*

No. 447 Clark, James, Windlaw, Carmunnock, "Douglas."

*Reserve*—No. 454 Wilson, William, Blackbyres, Barrhead, "Carrick."

The Meiklem Gold Challenge Cup, value 110 Guineas, *for best Clydesdale Gelding, "Extra Stock" eligible to compete.* Given by Mr William Meiklem, Bennoch Park, Kirkcaldy.

No. 447 Clark, James, Windlaw, Carmunnock, "Douglas."

*Reserve*—No. 454 Wilson, William, Blackbyres, Barrhead, "Carrick."

**CLASS 65. GELDING, born before 1933.—PREMIUMS,**  
*£15, £9, £6, and £4.*

- 1st No. 447 Clark, James, Windlaw, Carmunnock, "Douglas."  
 2nd No. 454 Wilson, William, Blackbyres, Barrhead, "Carrick."  
 3rd No. 448 Dunfermline Co-operative Society, Ltd., Estate Office, Crossford, Dunfermline, "Bob."  
 4th No. 455 Young, William, West Preston, Preston Mill, Dumfries, "Preston Jamie."  
 V No. 450 M'Connell, A. W., Scraesburgh, Jedburgh, "Sir Walter."  
 H No. 451 Mutter, Howey, & Co., Ltd., 51-53 Charlotte Street, Aberdeen, "Jamie."  
 C No. 449 Leadbetter, G. N., Whitton, Kelso, "Clyde."  
 C No. 452 Sommerville, R. & J., Smeaton, Dalkeith, "Willie."  
 C No. 453 Vint, Wyndham T., Thorn Cottage, Wroot, Doncaster, "Hope."

**CLASS 66. GELDING, born in 1933.—PREMIUMS,**  
£15, £9, £6, and £4.

- 1st No. 461 Young, William, West Preston, Preston Mill, Dumfries,  
"Preston Tom."  
2nd No. 456 Anderson, Sir Kenneth S., Bart., K.C.M.G., The Yair,  
Galashiels, "The Braw Lad."  
3rd No. 460 Wilson, William, Blackbyres, Barrhead, "Gavin."  
4th No. 459 Vint, Wyndham T., Thorn Cottage, Wroot, Doncaster,  
"Joe."  
V No. 457 Dodds, William, Clarilaw, Melrose, "Charlie."

**CLASS 67. GELDING, born in 1934.—PREMIUMS,**  
£15, £9, £6, and £4.

- 1st No. 467 Wilson, William, Blackbyres, Barrhead, "David."  
2nd No. 466 Vint, Wyndham T., Thorn Cottage, Wroot, Doncaster,  
"Harry."  
3rd No. 465 Clark, James, Windlaw, Carmunnock, "Sandy."  
4th No. 464 Anderson, Sir Kenneth S., Bart., K.C.M.G., The Yair,  
Galashiels, "The Souter."  
V No. 468 Young, William, West Preston, Preston Mill, Dumfries,  
"Preston Jubilee."  
H No. 463 Anderson, Sir Kenneth S., Bart., K.C.M.G., The Yair,  
Galashiels, "Border Reiver."

**CLASS 68. GELDING, born in 1935.—PREMIUMS,**  
£12, £8, £4, and £2.

- 1st No. 471 Cullen, G., Greenlea, Houghton, Carlisle, "Jack."  
2nd No. 475 Young, William, West Preston, Preston Mill, Dumfries,  
"Preston Tom Second."  
3rd No. 473 Sommerville, R. & J., Smeaton, Dalkeith, "Johnny."  
4th No. 470 Anderson, Sir Kenneth S., Bart., K.C.M.G., The Yair,  
Galashiels, "The Cornet."  
V No. 472 Sommerville, R. A., Wester Cowden, Dalkeith, "Dan."

**CLYDESDALE MARE AND FILLY.****PRESIDENT'S CHAMPION MEDAL**  
*for best Clydesdale Mare or Filly.*

- No. 501 Murdoch, Alexander, East Hallside, Cambuslang, Lanarkshire,  
"Rosetta."

*Reserve*—No. 482 M'Dowall, George, Briarbrae, Stranraer, "Lucinda."

Cawdor Challenge Cup, value 50 Guineas, *for best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.* This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland.

- No. 501 Murdoch, Alexander, East Hallside, Cambuslang, Lanarkshire,  
"Rosetta."

The "Angus" Perpetual Silver Challenge Cup, value 50 Guineas, *for the best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.* This Cup was presented by the Angus Agricultural Association to commemorate the holding of the Society's Annual Show at Dundee in 1933.

- No. 501 Murdoch, Alexander, East Hallside, Cambuslang, Lanarkshire,  
"Rosetta."

**CLASS 69. MARE**, of any age, with Foal at foot, or due to foal before 31st July 1936.—PREMIUMS, £20, £12, £7, and £4.

- 1st No. 479 Park, Misses M. & J., Brunstane, Portobello, "Lindoris" (59,049).  
 2nd No. 477 Cairns, James, Lochmalony, Cupar, Fife, "Lochmalony Emma."  
 3rd No. 478 Jackson, R. & D., Reedyloch, Edrom, Berwickshire, "Cynara."  
 4th No. 480 Park, Robert, Brunstane, Portobello, "Brunstane Bess."

**CLASS 70. YELD MARE**, born before 1933.—PREMIUMS, £15, £9, £6, and £4.

- 1st No. 482 M'Dowall, George, Briarbrae, Stranraer, "Lucinda."  
 2nd No. 484 Taylor, Robert, Milton Hall, Brompton Junction, Cumberland, "Queen o' Borgue."  
 3rd No. 481 Goldie, David, Barassie, Troon, "Barassie Winifred."  
 4th No. 483 Pace, Ferrier, Ormiston Mains, Ormiston, "Lady Supreme."  
 V No. 485 Templeton, T. & M., Sandyknowe, Kelso, "Sandyknowe Lady Iris."

**CLASS 71. YELD MARE or FILLY**, born in 1933.—PREMIUMS, £15, £9, £6, and £4.

- 1st No. 487 Dalziel, Robert, Rue, Holywood, Auldgirth, Mare, "Rue Perfect Lady."  
 2nd No. 488 Ferguson, William L., East Cairnweil, Stranraer, Filly, "Maralene."  
 3rd No. 491 Kerr, J. E., of Harviestoun, Dollar, Filly, "Harviestoun Pearl."  
 4th No. 495 Taylor, Robert, Milton Hall, Brompton Junction, Cumberland, Mare, "Lady Inverclyde."  
 V No. 493 Montgomery, James, North Pitkunnie, Cardenden, Mare, "Pitkinnie Sheila."  
 H No. 486 Clark, Alexander, Strathore, Thornton, Fife, Mare, "May Queen."

William Taylor Memorial Prize of £10 and Certificate to the breeder of the best Clydesdale Filly entered in Classes 72 and 73. Given by William Taylor Memorial Committee.

No. 501 Argo, George, Petty, Fyvie.

**CLASS 72. FILLY**, born in 1934.—PREMIUMS, £15, £9, £6, and £4.

- 1st No. 501 Murdoch, Alexander, East Hallside, Cambuslang, Lanarkshire, "Rosetta."  
 2nd No. 496 Aitkenhead, Walter A., Haining Valley, Linlithgow.  
 3rd No. 498 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Nell."  
 4th No. 503 Murray, Douglas D., The Dene, Seaham Harbour, "Seaham Ideal Lady."  
 V No. 500 M'Dowall, George, Briarbrae, Stranraer, "Baroness."  
 H No. 497 Boadle, Archie, West End, Flimby, Maryport, "Opulence II."  
 C No. 499 Leslie, Robert M., Murroes, Arbroath.  
 C No. 502 Murray, Douglas D., The Dene, Seaham Harbour, "Queen Mary."  
 C No. 505 Taylor, Robert, Milton Hall, Brompton Junction, Cumberland, "Milton Marina."

**CLASS 73. FILLY, born in 1935.—PREMIUMS,**  
*£15, £9, £6, and £4.*

- 1st No. 512 M'Farlane, John, Bailielands, Auchterarder, "Queen."  
 2nd No. 516 Murdoch, Alexander, East Hallside, Cambuslang, Lanarkshire, "Elaine."  
 3rd No. 518 Murdoch, Henry, Balgreen, Hollybush, "Balgreen Emblem."  
 4th No. 509 Campbell, G. & J., Gartness, Balfron.  
 V No. 517 Murdoch, Alexander, East Hallside, Cambuslang, Lanarkshire, "Venus."  
 H No. 511 Ferguson, William L., East Cairnweil, Stranraer, "Yvonne."  
 C No. 507 Barbour, John, Leaths, Castle Douglas, "Acacia."

## HUNTERS.

*PRESIDENT'S CHAMPION MEDAL*  
*for best Hunter (Classes 74 to 85).*

- No. 587 Thomson, A. D., of Nenthorn, Kelso, Gelding, "Novadra."  
*Reserve*—No. 575, Rodgeron, John, County Stables, Selkirk, Gelding,  
 "Irish Jubilee."

Fife and Kinross Perpetual Gold Challenge Cup, value £200, *for best Hunter. "Extra Stock" eligible to compete.* This Cup, along with an endowment of £400, was subscribed for by the Counties of Fife and Kinross in commemoration of the Society's first Show at Cupar, Fife, in 1912.

- No. 587 Thomson, A. D., of Nenthorn, Kelso, Gelding, "Novadra."  
*Reserve*—No. 575, Rodgeron, John, County Stables, Selkirk, Gelding,  
 "Irish Jubilee."

Dumfries Centenary Silver Challenge Cup, value £100, *for best Hunter. "Extra Stock" not eligible to compete.* Presented by members of the Dumfriesshire Hunt in 1930 to commemorate the centenary of the Highland Society's first Show at Dumfries in 1830.

- No. 587 Thomson, A. D., of Nenthorn, Kelso, Gelding, "Novadra."

The Cowdenknowes Perpetual Challenge Cup *for best Hunter entered in Classes 74 to 81, and 85. Confined to animals awarded the Special Prizes offered by the Buccleuch Hunter Breeding Society. "Extra Stock" eligible to compete.* Given by Buccleuch Hunter Breeding Society.

- No. 533 Dove, G. H. J., Estate Office, Mellerstain, Gordon, "Pennywise."

Special Prizes of £7 and £3 *for Mares with Foal at foot which have been served or will be served this season by "Corbridge."* "Extra Stock" *eligible to compete.* Given by Buccleuch Hunter Breeding Society.

- 1st No. 522 Sanderson, J. Martin, Linthill, Melrose, "Varragill."  
 2nd *Not awarded.*

**CLASS 74. HUNTER BROOD MARE**, with Foal at foot, or due to foal before 31st July 1936.—PREMIUMS, £15, £7, and £3.

- 1st No. 520 Chartres, C. B., Mindrum, Northumberland, "Maranda" (7954).  
 2nd No. 522 Sanderson, J. Martin, Linthill, Melrose, "Varragill."  
 3rd No. 523 Thomson, M. S., of Lambden, Greenlaw, "Glen Lynn."

Special Prize of £5 for best Foal by "Corbridge." Given by Buccleuch Hunter Breeding Society.

- No. 526 Sanderson, J. Martin, Linthill, Melrose, (Colt).

**CLASS 75. FOAL**, drawn from Class 74.—PREMIUMS, £7, £4, and £2.

- 1st No. 527 Thomson, M. S., of Lambden, Greenlaw, (Colt).  
 2nd No. 524 Chartres, C. B., Mindrum, Northumberland, (Filly).  
 3rd No. 526 Sanderson, J. Martin, Linthill, Melrose, (Colt).

Special Prize of £5 for best Gelding born in 1933 by "Pennant." Given by Buccleuch Hunter Breeding Society.

- No. 530 Dodds, William, Clarilaw, Melrose, "Clarilaw Knight."

**CLASS 76. GELDING**, born in 1933—in hand.—PREMIUMS, £10, £5, and £3.

- 1st No. 530 Dodds, William, Clarilaw, Melrose, "Clarilaw Knight."  
 2nd No. 532 Scott, T. W. Robson, Lethem, Jedburgh, "Carter Fell."  
 3rd No. 531 Paton, Alastair W., Woodside, Yetholm, Kelso, "Scrog."  
 V No. 529 Cox, Major T. H. C., Wooden, Kelso, "Blue Ensign."

*Best Hunter Filly, entered in Classes 77, 79, and 81, registered with a number in the Hunter Stud-Book, or the entry tendered within one month of the award—Champion Gold Medal, value £5. Given by the Hunters' Improvement and National Light Horse Breeding Society.*

- No. 534 Hamilton, Mrs M. E., Abbey Hotel, Melrose, "Old Dromore."

Reserve—No. 538 Steel, J., Kirkwood, Lockerbie, "Speedway" (8203).

Special Prize of £5 for best Filly born in 1933 by "Pennant." Given by Buccleuch Hunter Breeding Society.

- No. 533 Dove, G. H. J., Estate Office, Mellerstain, Gordon, "Pennywise."

**CLASS 77. FILLY**, born in 1933—in hand.—PREMIUMS, £10, £5, and £3.

- 1st No. 534 Hamilton, Mrs M. E., Abbey Hotel, Melrose, "Old Dromore."  
 2nd No. 538 Steel, J., Kirkwood, Lockerbie, "Speedway" (8203).  
 3rd No. 533 Dove, G. H. J., Estate Office, Mellerstain, Gordon, "Pennywise."  
 V No. 539 Thomson, M. S., of Lambden, Greenlaw, "Sheiling."  
 H No. 537 Rodgeron, John, County Stables, Selkirk, "Bridget."  
 C No. 535 M'Lelland, K. T., Wester Housebyres, Melrose, "Arethusa."  
 C No. 536 M'Queen, Miss H. D., Eredene, Galashiels, "Penny Plain" (8574).

Special Prize of £5 for best Gelding born in 1934 by "Pennant." Given by Buccleuch Hunter Breeding Society.

No. 547 Thomson, A. D., of Nenthorn, Kelso, "Burgee."

**CLASS 78. GELDING, born in 1934—in hand.—**

PREMIUMS, £10, £5, and £3.

- 1st No. 540 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, "Gingerbread II." (1896).
- 2nd No. 545 Galbraith, Charles E., The Barony, Dumfries, "Acbridge."
- 3rd No. 542 Chartres, C. B., Mindrum, Northumberland, "Minboul"  
(1875).
- V No. 546 Spencer-Nairn, Major Sir Robert, Bart., Leslie House,  
Leslie, Fife, "Bridegroom."
- H No. 547 Thomson, A. D., of Nenthorn, Kelso, "Burgee."
- C No. 548 Thomson, A. F., Cowbog, Kelso, "The Black Knight."

Special Prize of £5 for best Filly born in 1934 by "Pennant." Given by Buccleuch Hunter Breeding Society.

(Not awarded.)

**CLASS 79. FILLY, born in 1934—in hand.—**

PREMIUMS, £10, £5, and £3.

- 1st No. 551 Thomson, Mrs M. S., Lambden, Greenlaw, "Golden Melody"  
(8395).
- 2nd No. 552 Wilson, A. Milroy, Dalmakethar, Lockerbie, "Una."
- 3rd No. 549 Currie, Miss Thomson, Clatto, Cupar, Fife, "Millbridge"  
(8371).

Special Prize of £5 for best Colt or Gelding born in 1935 by "Corbridge." Given by Buccleuch Hunter Breeding Society.

(Not awarded.)

**CLASS 80. COLT or GELDING, born in 1935—**

*in hand.*—PREMIUMS, £10, £5, and £3.

- 1st No. 556 Parsons, Mrs E. H. T., Fordbank, Milliken Park, Renfrew-  
shire, Colt, "Gaytown."
- 2nd No. 553 Buchanan-Jardine, Sir John William, of Castle Milk, Bart.,  
Castle Milk, Lockerbie, Gelding, "Red Hot."
- 3rd No. 557 Parsons, Mrs E. H. T., Fordbank, Milliken Park, Renfrew-  
shire, Colt, "Carskiey."
- V No. 554 Dove, G. H. J., Estate Office, Mellerstain, Gordon, Gelding,  
"John Peel."

Special Prize of £5 for best Filly born in 1935 by "Corbridge." Given by Buccleuch Hunter Breeding Society.

No. 565 Teacher, Donald M., Spittal-on-Rule, Hawick, "Roulette II."  
(8383).

**CLASS 81. FILLY, born in 1935—in hand.**  
 —PREMIUMS, £10, £5, and £3.

- 1st No. 565 Teacher, Donald M., Spittal-on-Rule, Hawick, "Roulette II." (8383).  
 2nd No. 563 Steel, J., Kirkwood, Lockerbie, "Streamline" (8488).  
 3rd No. 562 Spencer-Nairn, Major Sir Robert, Bart., Leslie House, Leslie, Fife, "Quite Satisfied."  
 V No. 559 Currie, Mrs M., Ruthven, Coldstream, "Fugler."  
 H No. 566 Wilson, A. Milroy, Dalmakethar, Lockerbie, "Red Biddy."  
 C No. 560 Galbraith, Charles E., The Barony, Dumfries, "Bridget XVI." (8573). •

**CLASS 82. MARE or GELDING, born before 1932, to carry 14 stone 7 lb. and over—in saddle.**—PREMIUMS, £15, £10, and £5.

- 1st No. 575 Rodgerston, John, County Stables, Selkirk, Gelding, "Irish Jubilee."  
 2nd No. 569 Eckford, A. Herbert, Templeknowe, St Boswells, Gelding, "Gurteen."  
 3rd No. 574 Rennie, William W., Glenview, Paisley, Gelding, "Good Fellow."  
 V No. 571 Greig, D. G., of Eccles, Greenlaw, Gelding, "Barney."  
 H No. 568 Dun, James Pendreigh, Colmslie, Galashiels, Mare, "Hazel."

**CLASS 83. MARE or GELDING, born before 1932, to carry 13 stone and under 14 stone 7 lb.—in saddle.**—PREMIUMS, £15, £10, and £5.

- 1st No. 587 Thomson, A. D., of Nenthorn, Kelso, Gelding, "Novadra."  
 2nd No. 581 Elliot, T. R., Attonburn, Yetholm, Kelso, Gelding, "Attonburn."  
 3rd No. 578 Brown, H. Stuart, Cathlaw, Torphichen, West Lothian, Gelding, "Young Lochinvar."  
 V No. 580 Dumfries, The Countess of, Dumfries House, Cumnock, Ayrshire, Gelding, "Dennistown."  
 H No. 577 Baillie, Colonel A. C., D.S.O., Harleyburn, Melrose, Gelding, "Le Maitre."  
 C No. 579 Cox, Major T. H. C., Wooden, Kelso, Gelding, "Summer Time" (1545).

**CLASS 84. MARE or GELDING, born before 1932, to carry under 13 stone—in saddle.**—PREMIUMS, £15, £10, and £5.

- 1st No. 588 Black, Mrs W. C. G., Teasses, Leven, Fife, Gelding, "Ramoneur."  
 2nd No. 592 Kennedy, Lieut.-Colonel J. G., Chesters, Ancrum, Gelding, "Pilgrim."  
 3rd No. 596 Russell, Major George, of Kingsdale, Windygates, Fife, Gelding, "Artine."  
 V No. 591 Dumfries, The Countess of, Dumfries House, Cumnock, Ayrshire, Gelding, "Bachelor's Heart" (1932).  
 H No. 599 Spencer-Nairn, Major Sir Robert, Bart., Leslie House, Leslie, Fife, Mare, "Bridesmaid."  
 C No. 597 Scott, T. W. Robson, Lethem, Jedburgh, Gelding, "Ivanhoe."



Special Prize of £5 for best Mare or Gelding born in 1932—in saddle—by "Barbican" or "Pennant." Given by Buccleuch Hunter Breeding Society.

No. 611 Greig, D. G., of Eccles, Greenlaw, Gelding, "Barkis."

**CLASS 85. MARE or GELDING, born in 1932—in saddle.—**  
PREMIUMS, £15, £10, and £5.

- 1st No. 610 Goodson, Captain Alan R., Marlefield, Roxburgh, Gelding, "Borderbridge."  
2nd No. 608 Dodgson, Miss, Coulmore, Kessock, Inverness, Mare, "Cora."  
3rd No. 611 Greig, D. G., of Eccles, Greenlaw, Gelding, "Barkis."  
V No. 605 Chartres, C. B., Mindrum, Northumberland, Gelding, "Manbridge" (1670).  
H No. 617 Thomson, A. D., of Nenthorn, Kelso, Gelding, "Query."  
C No. 618 Tweedie, Lieut.-Colonel R. W., Phantassie, Prestonkirk, Mare, "Cuckoo."

**CLASS 86. HACK of HUNTER TYPE, born in or before 1932,**  
not exceeding 15.2 hands—in saddle.—PREMIUMS, £8, £5, and £3.

- 1st No. 631 Younger, Mrs Laurence, Dabton, Thornhill, Dumfriesshire, Gelding, "Harmony."  
2nd No. 628 Sharpe, Major R. W., of The Park, Earlstoun, Filly, "Rennieston."  
3rd No. 629 Thomson, A. D., of Nenthorn, Kelso, Mare, "Spring Maid."  
V No. 622 Dodgson, Miss, Coulmore, Kessock, Inverness, Mare, "Early Bird."  
H No. 619 Baillie, Colonel A. C., D.S.O., Harleyburn, Melrose, Gelding, "Correct Card."  
C No. 621 Dalziel, Ralph Kennedy, Overshiels, Stow, Midlothian, Mare, "Golden Plover."  
C No. 627 Salvesen, Miss E. R., Lathallan, Polmont, Mare, "Yarrow."

## HIGHLAND AND WESTERN ISLAND PONIES.

*PRESIDENT'S CHAMPION MEDAL*  
for best Highland or Western Island Pony.

No. 646 Wright, Major D. G. Moncrieff, Elcho Park, Rhynd, Perth, "Staffin Princess" (6236).

Reserve—No. 653 Wilson, T. G., Carbeth Home Farm, Balfron Station, Stirlingshire, "Shelagh" (6816).

Kinmonth Perpetual Gold Challenge Quaich for best Highland or Western Island Pony. This Quaich—along with a sum of money to provide a miniature replica in silver annually—was presented by Mrs Moncrieff Wright, Kinmonth, Bridge of Earn, in memory of her husband, the late John Moncrieff Wright of Kinmonth.

No. 646 Wright, Major D. G. Moncrieff, Elcho Park, Rhynd, Perth, "Staffin Princess" (6236).

**Special Prize of £8 given by Highland Pony Society for best Male Animal not exceeding 14.2 hands, entered in Classes 87 and 88. "Extra Stock" not eligible to compete. Competition strictly confined to animals passed sound and free from hereditary disease.**

No. 635 Honeyman, Mrs R. Wemyss, Derculich, Strathtay, Perthshire, "Jason of Derculich" (1934).

**Special Prize of £5 for best Stallion entered in Class 87. "Extra Stock" eligible to compete. Given by the National Pony Society.**

No. 632 Ewing, Ian, Mounthooly, Jedburgh, "Mounthooly Rover" (1972).

**CLASS 87. STALLION, born before 1934, not exceeding 14.2 hands.**  
—PREMIUMS, £8, £5, £3, and £2.

1st No. 632 Ewing, Ian, Mounthooly, Jedburgh, "Mounthooly Rover" (1972).

2nd No. 633 Honeyman, Mrs R. Wemyss, Derculich, Strathtay, Perthshire, "Jester of Derculich" (1893).

**Special Prize of £5 for best Entire Colt entered in Class 88. Given by the National Pony Society.**

No. 635 Honeyman, Mrs R. Wemyss, Derculich, Strathtay, Perthshire, "Jason of Derculich" (1934).

**CLASS 88. ENTIRE COLT, born on or after 1st January 1934, not exceeding 14.2 hands.**—PREMIUMS, £8, £5, £3, and £2.

1st No. 635 Honeyman, Mrs R. Wemyss, Derculich, Strathtay, Perthshire, "Jason of Derculich" (1934).

2nd No. 636 Mackelvie, Donald, New Lanark, Lamlash, "Garvadale" (1977).

3rd No. 634 Ewing, Ian, Mounthooly, Jedburgh, "Mounthooly Bobbie" (1971).

4th No. 637 Wilson, T. G., Carbeth Home Farm, Balfron Station, Stirlingshire.

**Special Prize of £8 given by Highland Pony Society for best Female Animal not exceeding 14.2 hands, entered in Classes 89, 90, and 91. "Extra Stock" not eligible to compete. Competition strictly confined to animals passed sound and free from hereditary disease.**

No. 653 Wilson, T. G., Carbeth Home Farm, Balfron Station, Stirlingshire, "Shelagh" (6816).

**CLASS 89. MARE, any age, not exceeding 14.2 hands, with Foal at foot, or due to foal before 31st July 1936.**—PREMIUMS, £8, £5, £3, and £2.

1st No. 639 Wilson, T. G., Carbeth Home Farm, Balfron Station, Stirlingshire, "Seonaid" (6815).

2nd No. 638 Honeyman, Mrs R. Wemyss, Derculich, Strathtay, Perthshire, "Iolaire" (5944).

3rd No. 640 Wright, Major D. G. Moncrieff, Elcho Park, Rhynd, Perth, "Kilmuir Princess" (6640).

**CLASS 90.** YELD MARE or FILLY, born before 1934, not exceeding 14.2 hands.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 644 Macbeth, W. Gilchrist, of Dunira, Comrie, Mare, "White Spot" (5915).  
 2nd No. 645 Macbeth, W. Gilchrist, of Dunira, Comrie, Mare, "Queenie XI." (6297).  
 3rd No. 642 Ewing, Ian, Mounthooly, Jedburgh, Filly, "Mounthooly Isla" (6812).  
 4th No. 641 Cameron, Mrs J. A., Glenfinlas, Callander, Filly, "Gipsy Diamond" (6773).  
 V No. 643 Honeyman, Mrs R. Wemyss, Derculich, Strathtay, Perthshire, Mare, "Glaster" (6170).

**EXTRA STOCK.**

The following was awarded the £5 Prize:—

- No. 646 Wright, Major D. G. Moncrieff, Elcho Park, Rhynd, Perth, Mare, "Staffin Princess" (6236).

**CLASS 91.** FILLY, born on or after 1st January 1934, not exceeding 14.2 hands.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 653 Wilson, T. G., Carbeth Home Farm, Balfron Station, Stirlingshire, "Shelagh" (6816).  
 2nd No. 652 Mackelvie, Donald, New Lanark, Lamlash, "Faire" (6825).  
 3rd No. 654 Wright, Major D. G. Moncrieff, Elcho Park, Rhynd, Perth, "Grizel of Kinmonth" (6728).  
 4th No. 650 Ewing, Ian, Mounthooly, Jedburgh, "Mounthooly Sally" (6814).  
 V No. 649 Ewing, Ian, Mounthooly, Jedburgh, "Mounthooly Nan" (6813).  
 H No. 648 Cameron, Mrs J. A., Glenfinlas, Callander, "Rhenetra Diamond" (6775).  
 C No. 647 Blair, Mrs A. J., Beananach, Strathyre, Perthshire, "Shonaidh of Beananach."  
 C No. 651 Macbeth, W. Gilchrist, of Dunira, Comrie, "Queen Charming of Dunira" (6664).

**SHETLAND PONIES.**

(ALL SHOWN IN HAND.)

**PRESIDENT'S CHAMPION MEDAL**  
*for best Shetland Pony.*

- No. 675 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Pixie."

*Reserve*—No. 660 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Birk of Manar" (1301).

Perpetual Silver Challenge Cup, value £50, *for best Group of Shetland Ponies drawn from the ordinary Classes, consisting of one male and two females. "Extra Stock" eligible to compete.* Presented by a few members of the Shetland Pony Stud-Book Society.

- Nos. 663, 675, 678 Kerr, J. E., of Harviestoun, Dollar.

Silver Medal *for the best Shetland Pony of the sex opposite to that of the winner of the President's Medal, entered or eligible for entry in the Shetland Pony Stud-Book.* Given by the Shetland Pony Stud-Book Society.

- No. 660 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Birk of Manar" (1301).

**CLASS 92. STALLION**, not exceeding 10½ hands, born before 1933.  
—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 659 Macbeth, W. Gilchrist, of Dunira, Comrie, "Rebel of Earlsall" (1342).  
2nd No. 656 Dick, Mrs E. M., of Transy, Dunfermline, "Benjamin" (1299).  
3rd No. 655 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Lerwick Matchless."  
4th No. 658 Macbeth, W. Gilchrist, of Dunira, Comrie, "Hero of Dunira" (1310).

**EXTRA STOCK.**

The following was awarded the £5 Prize :—

- No. 660 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Birk of Manar" (1301).

**CLASS 93. ENTIRE COLT**, not exceeding 10½ hands, born in 1933 or 1934.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 663 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Star."  
2nd No. 662 Dick, Mrs E. M., of Transy, Dunfermline, "Helistic of Transy."  
3rd No. 665 Ritchie, Miss A. R., Netherley House, Stonehaven, "Max of Earlsall."  
4th No. 664 Macbeth, W. Gilchrist, of Dunira, Comrie, "Porthus of Dunira."  
V No. 661 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Hackon of Newmore."

**CLASS 94. MARE**, not exceeding 10½ hands, with Foal at foot, or due to foal before 31st July 1936.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 666 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Thora of Maryfield" (4228).  
2nd No. 669 Dick, Mrs E. M., of Transy, Dunfermline, "Stelmone of Transy."  
3rd No. 671 Macbeth, W. Gilchrist, of Dunira, Comrie, "Elderflower II. of Earlsall" (4604).  
4th No. 672 Ritchie, Miss A. R., Netherley House, Stonehaven, "Ladybird of Maryfield."  
V No. 670 Macbeth, W. Gilchrist, of Dunira, Comrie, "Emita of Earlsall" (4073).  
H No. 667 Davidson, Alexander, Mundurno, Bridge of Don, Aberdeen, "Mundurno Brown Lass" (783) (I.S.).  
C No. 668 Dick, Mrs E. M., of Transy, Dunfermline, "Pamina of Transy."

**CLASS 95. YELD MARE**, not exceeding 10½ hands.—  
PREMIUMS, £8, £5, £3, and £2.

- 1st No. 675 Kerr J. E., of Harviestoun, Dollar, "Harviestoun Pixie."  
2nd No. 676 Macbeth, W. Gilchrist, of Dunira, Comrie, "May of Earlsall."  
3rd No. 674 Dick, Mrs E. M., of Transy, Dunfermline "Thistley of Transy" (4611).

**CLASS 96. FILLY**, not exceeding 10½ hands, born in 1933 or 1934.  
—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 678 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Pearl."  
2nd No. 677 Dick, Mrs E. M., of Transy, Dunfermline, "Fearanne of Transy."  
3rd No. 679 Kerr, J. E., of Harviestoun, Dollar, "Harviestoun Pat."

## RIDING PONIES.

**CLASS 97.** MARE or GELDING, any age, over 13.2 hands, and not exceeding 14.2 hands—*in saddle*.—PREMIUMS, £5, £3, and £2.

- 1st No. 693 Smith, Launcelot E., Piper Close, Corbridge-on-Tyne, Northumberland, Mare, "Primula."
- 2nd No. 692 Smith, Launcelot E., Piper Close, Corbridge-on-Tyne, Northumberland, Gelding, "Mickey Mouse."
- 3rd No. 682 Campbell, Hon. Jean, Hunthill, Jedburgh, Mare, "Santa Fé."
- V No. 686 Paton, Alastair W., Woodside, Yetholm, Kelso, Mare, "Carol."
- H No. 694 Stewart, Miss Loraine, Faughhill, St Boswells, Mare, "June."
- C No. 684 Forrest, William, Horsville, 264 Pinkston Road, Glasgow, Gelding, "Snowdrop."
- C No. 689 Rodgeron, John, County Stables, Selkirk, Gelding, "Mutiny."
- C No. 695 Thorburn, Miss Elizabeth, Cotgreen, Melrose, Mare, "Polly."

**CLASS 98.** MARE or GELDING, any age, over 12 hands, and not exceeding 13.2 hands—*in saddle*—to be ridden by boy or girl not exceeding 14 years of age.—PREMIUMS, £5, £3, and £2.

- 1st No. 704 Vaux, Miss Margaret E., Brandfields, Cusworth, Doncaster, Gelding, "Dazzle."
- 2nd No. 702 Henderson, Master Ian, 24 Park Road, Paisley, Mare, "Rose Marie."
- 3rd No. 698 Campbell, Hon. Jean, Hunthill, Jedburgh, Gelding, "Tan-y-Bwlch Bard."
- V No. 700 Douglas, Thomas, of Gatehousecote, Hawick, Gelding, "Bingo."
- H No. 696 Aiton, Master James Scott, Legerwood, Earlston, Berwickshire, Gelding, "Brecon."
- C No. 699 Colville, Miss Hazel, Chapel-on-Leader, Earlston, Berwickshire, Mare, "Mrs Jinks."
- C No. 701 Geddes, Master William Leys, Sunnyside, Melrose, Gelding, "Rufus."
- C No. 703 Rodgeron, John, County Stables, Selkirk, Mare, "Stella."

**CLASS 99.** MARE or GELDING, any age, not exceeding 12 hands—*in saddle*—to be ridden by boy or girl not exceeding 12 years of age.—PREMIUMS, £5, £3, and £2.

- 1st No. 705 Aiton, Miss Margaret Scott, Legerwood, Earlston, Berwickshire, Mare, "Ginger."
- 2nd No. 711 Rodgeron, John, County Stables, Selkirk, Gelding, "Brown Sugar."
- 3rd No. 712 Thomson, M. S., of Lambden, Greenlaw, Berwickshire, Gelding, "Broncho."
- V No. 709 M'Lelland, Miss Catherine, Wester Housebyres, Melrose, Mare, "Peggy."
- H No. 708 Elliot, Master Gilbert, Attonburn, Yetholm, Kelso, Mare, "Jehu."
- C No. 707 Dalgetty, Master Norman, 160 Wood Street, Galashiels, Gelding, "Prince Palatine."

## JUMPING COMPETITIONS.

Champion Prize of £10 for most points in Prizes with one Horse in Classes 1, 3, and 5.

CONDITIONS.—First Prize to count five points; Second Prize, four points; Third Prize, three points; Fourth Prize, two points; Fifth Prize, one point, The money to be evenly divided in the event of a tie.

Makin, Thomas, Newton Farm, Newton, Yorks., Gelding, "Sparkle" (5½ points).

## CLASS 1. HORSE or PONY, any height.—

PREMIUMS, £20, £15, £10, £5, and £3.

1st	} equal	Makin, Thomas, Newton Farm, Newton, Yorks., Gelding, "Sparkle."
2nd		Whitehead, Mrs R., Byrn, Rhydderch, Abergavenny, Gelding,
3rd		"Huntsman."
4th	} equal	Grange Bros., Alvaston, Nantwich, Gelding, "Found."
5th		Massarella, A., & Sons, Ltd., Belmont, Bentley, Doncaster, Mare, "Desiree."
		Grange Bros., Alvaston, Nantwich, Gelding, "Desiree."

CLASS 2. HORSE or PONY, any height, confined to competitors permanently resident in Scotland. The Horse or Pony to have been the property of the competitor since 1st May 1936.—PREMIUMS, £10, £8, £5, £3, and £2.

1st	} equal	Mitchell, Harold, Tulliallan Castle, Kincardine-on-Forth, Mare, "Mary."
2nd		Brown, Miss M. C., Westerton, Killearn, Mare, "Silver Mist."
3rd	Cowe,	Miss Peggy, Baldersbury, Berwick-on-Tweed, Gelding, "Peter."
4th	} equal	Donald, Miss E. S., Riding School, Bonnyton, Kilmarnock, Gelding, "Brown Jug."
5th		Mitchell, Harold, Tulliallan Castle, Kincardine-on-Forth, Gelding, "Ballalate."

CLASS 3. HORSE or PONY, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the First Prize, and 4 inches for the winner of the Second Prize in Class 1.—PREMIUMS, £20, £15, £10, £5, and £3.

1st	} equal	Brown, Miss M. C., Westerton, Killearn, Mare, "Silver Mist."
2nd		Makin, Thomas, Newton Farm, Newton, Yorks., Gelding, "Tony."
3rd		Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Bon Bon."
4th		Whitehead, Mrs R., Byrn, Rhydderch, Abergavenny, Gelding, "Buckle."
5th		Blackwood, Patrick, Balgreen, Mid Calder, Mare, "Kopje."
		Grange Bros., Alvaston, Nantwich, Gelding, "Desiree."

**CLASS 4. HORSE or PONY, any height.—**  
**PREMIUMS, £10, £8, £5, £3, and £2.**

1st 2nd 3rd 4th 5th	} equal	Massarella, A., & Sons, Ltd., Belmont, Bentley, Doncaster, Gelding, "Mustard."
		Mitchell, Harold, Tulliallan Castle, Kincardine-on-Forth, Gelding, "Ballalate."
		Grange Bros., Alvaston, Nantwich, Gelding, "Found."
		Whitehead, Mrs R., Byrn, Rhydderch, Abergavenny, Gelding, "Huntsman."
		Bradley, Ernest, Newton Grange, Great Ayton, Mare, "Gob-lindale."
		Donald, Miss E. S., Riding School, Bonnyton, Kilmarnock, Gelding, "Brown Jug."
		Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Bon Bon."
		Hall, Henry, Whitcheater, Heddon, Newcastle-on-Tyne, Gelding, "Sparky."

**CLASS 5. HORSE or PONY, any height, Handicap, hurdles and gate**  
 being raised 8 inches for the winner of the First Prize, and 4 inches  
 for the winner of the Second Prize in either of Classes 1 or 3—4 inches  
 extra for the winner of the two First Prizes in Classes 1 and 3.—  
**PREMIUMS, £15, £10, £5, £3, and £2.**

1st 2nd 3rd 4th 5th	} equal	Mitchell, Harold, Tulliallan Castle, Kincardine-on-Forth, Gelding, "Ballalate."
		Cowe, Miss Peggy, Baldersbury, Berwick-on-Tweed, Mare, "Plain Jaue."
		Wylie Gordon, Mrs R., Danepark Riding Academy, Symington, Ayrshire, Mare, "Fay."
		Massarella, A., & Sons, Ltd., Belmont, Bentley, Doncaster, Gelding, "Mustard."
		Mitchell, Harold, Tulliallan Castle, Kincardine-on-Forth, Mare, "Mary."
		Whitehead, Mrs R., Byrn, Rhydderch, Abergavenny, Gelding, "Tom."
		Makin, Thomas, Newton Farm, Newton, Yorks., Gelding, "Sparkle."
		Whitehead, Mrs R., Byrn, Rhydderch, Abergavenny, Gelding, "Buckle."
		Taylor, Joseph, Moss Hall, Stretton, Warrington, Mare, "Bon Bon."

# SHEEP

## BLACKFACE.

### PRESIDENT'S CHAMPION MEDAL for best Blackface Sheep.

No. 748 Hamilton, Matthew G., Woolfords, Cobbinshaw.

Reserve—No. 717 Macfarlane, James, Steps of Cally, Blairgowrie, "Mountain Monarch."

The "Lochlane" Silver Challenge Cup, value £50, for best Group of three Blackface Sheep, consisting of Ewe, Gimmer, and Ewe Lamb, drawn from Classes 100 to 106, "Extra Stock" eligible to compete. Presented by Mr and Mrs Francis A. Rottenburg, Lochlane, Crieff.

Nos. 793, 802, 812 Macfarlane, James, Steps of Cally, Blairgowrie.

The "James Archibald" Prize of about £20, for the best Sheep in the Blackface Classes (excluding Lambs), "Extra Stock" eligible to compete. This Prize consists of the annual free income from a fund of £600, gifted by the late David Archibald, Christchurch, New Zealand, to found a Prize to be offered at the Annual Shows of the Society in commemoration of his brother, the late James Archibald, Overshiels, Stow.

No. 748 Hamilton, Matthew G., Woolfords, Cobbinshaw.

### CLASS 100. TUP, three Shear and over.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 717 Macfarlane, James, Steps of Cally, Blairgowrie, "Mountain Monarch."
- 2nd No. 721 Vickers, T. L., Troloss, Elvanfoot, "Investment."
- 3rd No. 720 Provan, A. & D., Gateside, Douglas, Lanark, "Adoption."
- 4th No. 719 Paton, Robert C., Lettre, Killearn, "Britannia."
- V No. 715 Hamilton, Matthew G., Woolfords, Cobbinshaw, "Better Times."
- H No. 716 Knox-Fletcher, James, Geirston, Kilbirnie.
- C No. 714 Hamilton, Matthew G., Woolfords, Cobbinshaw, "Haddington."
- C No. 718 Mitchell, William, Hazelside, Douglas, Lanark, "Weston Star."

### EXTRA STOCK.

The following was awarded the £5 Prize:—

No. 722 Mitchell, William, Hazelside, Douglas, Lanark, "Mountaineer."



**CLASS 101. TUP, two Shear.—PREMIUMS,**  
*£12, £8, £4, and £2.*

- 1st No. 723 Cayley, Arthur, of Carham Hall, Coldstream.  
 2nd No. 724 Cayley, Arthur, of Carham Hall, Coldstream.  
 3rd No. 728 Hamilton, Matthew G., Woolfords, Cobbinshaw.  
 4th No. 730 Macfarlane, James, Steps of Cally, Blairgowrie, "Corner Stone."  
 V No. 732 Mitchell, William, Hazelside, Douglas, Lanark.  
 H No. 735 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Moorfoot Farm, Gorebridge, "Keen Blade."  
 C No. 731 Mitchell, William, Hazelside, Douglas, Lanark.

**CLASS 102. SHEARLING TUP.—PREMIUMS,**  
*£12, £8, £4, and £2.*

- 1st No. 748 Hamilton, Matthew G., Woolfords, Cobbinshaw.  
 2nd No. 769 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Moorfoot Farm, Gorebridge, "Royal Exchange."  
 3rd No. 744 Hamilton, Matthew G., Woolfords, Cobbinshaw.  
 4th No. 770 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Moorfoot Farm, Gorebridge, "D.S.O."  
 V No. 763 Paton, Robert C., Lettre, Killearn.  
 H No. 765 Provan, A. & D., Gateside, Douglas, Lanark.  
 C No. 745 Hamilton, Matthew G., Woolfords, Cobbinshaw.  
 C No. 753 Macfarlane, James, Steps of Cally, Blairgowrie, "Gallant Lad."  
 C No. 758 Marshall & Mitchell, Craighead of Bamf, Alyth.  
 C No. 740 Dickson, William C., Glassingall, Dunblane.

**CLASS 103. TUP LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 777 Macfarlane, James, Steps of Cally, Blairgowrie.  
 2nd No. 774 Cayley, Arthur, of Carham Hall, Coldstream.  
 3rd No. 784 Rottenburg, F. A., of Lochlane, Crieff.  
 V No. 782 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates), Moorfoot Farm, Gorebridge.  
 H No. 788 Vickers, T. L., Troloss, Elvanfoot.  
 C No. 776 Lindsay, G. D. & W., Blackbyres, Fenwick, Kilmarnock.

**CLASS 104. EWE, above one Shear (born before 1935), with Lamb at foot.—PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 793 Macfarlane, James, Steps of Cally, Blairgowrie, "Kathleen Mavourneen."  
 2nd No. 794 Paton, Robert C., Lettre, Killearn.  
 3rd No. 790 Cayley, Arthur, of Carham Hall, Coldstream.  
 4th No. 796 Struthers, G. & R., South Halls, Strathaven.  
 V No. 795 Rottenburg, F. A., of Lochlane, Crieff.  
 H No. 792 Lindsay, G. D. & W., Blackbyres, Fenwick, Kilmarnock, "Enchantress."  
 C No. 791 Cayley, Arthur, of Carham Hall, Coldstream.

**CLASS 105. SHEARLING EWE or GIMMER (born in 1935).—**

**PREMIUMS, £10, £5, £3, and £2.**

- 1st No. 800 Lindsay, G. D. & W., Blackbyres, Fenwick, Kilmarnock,  
"Invicta."  
2nd No. 807 Struthers, G. & R., South Halls, Strathaven.  
3rd No. 802 Macfarlane, James, Steps of Cally, Blairgowrie.  
4th No. 797 Cayley, Arthur, of Carham Hall, Coldstream.  
V No. 801 Macfarlane, James, Steps of Cally, Blairgowrie.  
H No. 808 Struthers, G. & R., South Halls, Strathaven.  
C No. 806 Rottenburg, F. A., of Lochlane, Crieff.  
C No. 805 Rottenburg, F. A., of Lochlane, Crieff.

**CLASS 106. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 809 Cayley, Arthur, of Carham Hall, Coldstream.  
2nd No. 811 Lindsay, G. D. & W., Blackbyres, Fenwick, Kilmarnock.  
3rd No. 814 Rosebery, The Earl of, D.S.O., M.C. (Rosebery Estates),  
Moorfoot Farm, Gorebridge.  
V No. 812 Macfarlane, James, Steps of Cally, Blairgowrie.  
H No. 810 Lindsay, G. D. & W., Blackbyres, Fenwick, Kilmarnock.  
C No. 815 Rottenburg, F. A., of Lochlane, Crieff.

**CHEVIOT.**

**PRESIDENT'S CHAMPION MEDAL**  
*for best Cheviot Sheep.*

- No. 852 Thomson, John, Bushelhill, Cockburnspath, "Bushelhill Mascot."  
*Reserve*—No. 891 Douglas, Walter S., Upper Hindhope, Jedburgh.

Renfrewshire Perpetual Gold Challenge Cup, value £250, *for best Cheviot Sheep, "Extra Stock" eligible to compete.* This Cup, along with an endowment of £500, was provided from money collected in Renfrewshire by the late Provost Muir M'Kean of Paisley, and is in commemoration of the Society's first Show in the county of Renfrew in 1913.

- No. 852 Thomson, John, Bushelhill, Cockburnspath, "Bushelhill Mascot."  
*Reserve*—No. 891 Douglas, Walter S., Upper Hindhope, Jedburgh.

Borthwick Perpetual Challenge Cup, value £25, gifted by Mr J. Borthwick, *for best Sheep in the Cheviot Classes, "Extra Stock" eligible to compete.* Given by the Cheviot Sheep Society.

- No. 852 Thomson, John, Bushelhill, Cockburnspath, "Bushelhill Mascot."

**CLASS 107. TUP, above one Shear.—PREMIUMS,**  
**£12, £8, £4, and £2.**

- 1st No. 828 Elliot, T. R., Attonburn, Yetholm, Kelso.  
2nd No. 822 Elliot, Arthur, Hindhope, Jedburgh, "Royal Banner."  
3rd No. 827 Elliot, Robert T., Chatto, Kelso, "Lord Aberdeen."  
4th No. 825 Elliot, John, Blackhaugh, Clovenfords.  
V No. 821 Douglas, Walter S., Upper Hindhope, Jedburgh, "Santa Claus."  
H No. 829 Elliot, William I., Cleuries, Sanquhar, "Jubilee." (5362).  
C No. 820 Douglas, Walter S., Upper Hindhope, Jedburgh, "Sandy Herd."  
C No. 826 Elliot, Robert T., Chatto, Kelso, "Sir William."  
C No. 831 Smith, J. R. C., Mowhaugh, Kelso, "Sunnyside" (5287).

**CLASS 108. SHEARLING TUP.**—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 852 Thomson, John, Bushelhill, Cockburnspath, "Bushelhill Mascot."  
 2nd No. 851 Smith, J. R. C., Mowhaugh, Kelso.  
 3rd No. 841 Elliot, Arthur, Hindhope, Jedburgh.  
 4th No. 845 Elliot, Robert T., Chatto, Kelso.  
 V No. 842 Elliot, John, Blackhaugh, Clovenfords.  
 H No. 839 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 C No. 844 Elliot, John, Blackhaugh, Clovenfords.

**CLASS 109. TUP LAMB.**—PREMIUMS, £5, £3, and £2.

- 1st No. 859 Elliot, Arthur, Hindhope, Jedburgh.  
 2nd No. 857 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 3rd No. 862 Elliot, John, Blackhaugh, Clovenfords.  
 V No. 870 Thomson, John, Bushelhill, Cockburnspath.  
 H No. 858 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 C No. 865 Elliot, T. R., Attonburn, Yetholm, Kelso.

**CLASS 110. EWE, above one Shear, with Lamb at foot.**  
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 876 Elliot, John, Blackhaugh, Clovenfords.  
 2nd No. 875 Elliot, Arthur, Hindhope, Jedburgh.  
 3rd No. 874 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 4th No. 886 Thorburn, Lady, Glenormiston, Innerleithen.  
 V No. 878 Elliot, T. R., Attonburn, Yetholm, Kelso.  
 H No. 881 Hogg, George, Penmanshiel, Grantshouse.  
 C No. 879 Elliot, Wilham I., Cleuries, Sanquhar.

**CLASS 111. SHEARLING EWE or GIMMER.**—  
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 891 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 2nd No. 889 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 3rd No. 904 Smith, J. R. C., Mowhaugh, Kelso.  
 4th No. 890 Douglas, Walter S., Upper Hindhope, Jedburgh.  
 V No. 892 Elliot, Arthur, Hindhope, Jedburgh.  
 H No. 900 Robson, John, Newton, Tarsset.  
 C No. 894 Elliot, John, Blackhaugh, Clovenfords.

**CLASS 112. EWE LAMB.**—PREMIUMS, £5, £3, and £2.

- 1st No. 915 Elliot, T. R., Attonburn, Yetholm, Kelso.  
 2nd No. 921 Thorburn, Lady, Glenormiston, Innerleithen.  
 3rd No. 920 Thomson, John, Bushelhill, Cockburnspath, "Bonnie Kilminey."  
 V No. 910 Elliot, Arthur, Hindhope, Jedburgh.  
 H No. 913 Elliot, Robert T., Chatto, Kelso.  
 C No. 909 Douglas, Walter S., Upper Hindhope, Jedburgh.

**BORDER LEICESTER.****PRESIDENT'S CHAMPION MEDAL**  
*for best Border Leicester Sheep.*

No. 940 Howie, James, & Sons, Muirside, Dumfries, (BL 869) L 11.

Reserve—No. 998 Howie, A. B., Eshott Brocks, Felton, Morpeth, (BL 869) L 2.

Tweeddale Gold Medal, value about £25, *for best Border Leicester Tup, "Extra Stock" eligible to compete.* Annual free income from fund of £500.

No. 940 Howie, James, & Sons, Muirside, Dumfries, (BL 869) L 11.

Gold Medal, *for best Male Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock-Book. Animals entered as "Extra Stock" not eligible.* Given by the Society of Border Leicester Sheep Breeders.

No. 940 Howie, James, & Sons, Muirside, Dumfries, (BL 869) L 11.

**CLASS 113. TUP, above one Shear.—PREMIUMS,**  
£12, £8, £4, and £2.

1st No. 924 Howie, James, & Sons, Muirside, Dumfries, "Headline" (10,355).

2nd No. 923 Cross, Donald, Knockdon, Maybole, "Salaam" (10,484).

3rd No. 926 Moyes, James C., Renmure, Inverkeilor, "Discovery's Heir."

4th No. 922 Chalmers, William, Summerfield, Dumfries, "Lexicon" (BL 282) K 5.

V No. 927 Turner, James, Loaninghead, Balfron Station, "Carrick Royal" (9842).

**CLASS 114. SHEARLING TUP.—PREMIUMS, £12, £8, £4, and £2.**

1st No. 940 Howie, James, & Sons, Muirside, Dumfries, (BL 869) L 11.

2nd No. 935 Cross, Donald, Knockdon, Maybole, (BL 39) L 26.

3rd No. 949 Moyes, James C., Renmure, Inverkeilor, "Duplicator."

4th No. 929 Brown, George S., Smailholm, Kelso.

V No. 938 Dickie, Charles H., Wooperton, Northumberland, (BL 26 A) L 5.

H No. 950 Moyes, James C., Renmure, Inverkeilor.

C No. 931 Cameron, R. C., Greenlawdean, Greenlaw.

C No. 934 Clark, J. G. D., Eastfield, Whittingehame.

C No. 946 Milne, William M., Balbinny, Forfar.

C No. 948 Moyes, H. B., Kilmux, Leven.

**CLASS 115. TUP LAMB.—PREMIUMS, £10, £5, £3, and £2.**

1st No. 968 Howie, John, Hillhouse, Kilmarnock.

2nd No. 975 Templeton, George, Carnell Home Farm, Hurlford, Kilmarnock.

3rd No. 959 Cochrane, Alexander, Nether Craig, Kilmarnock.

4th No. 958 Chalmers, William, Summerfield, Dumfries, (BL 99 D) M 1.

V No. 963 Howie, A. B., Eshott Brocks, Felton, Morpeth.

H No. 965 Howie, James, & Sons, Muirside, Dumfries.

C No. 954 Barr, Allan, Hobsland, Monkton.

C No. 964 Howie, James, & Sons, Muirside, Dumfries.

C No. 966 Howie, James, & Sons, Muirside, Dumfries.

Gold Medal, for best Female Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock-Book. Animals entered as "Extra Stock" not eligible. Given by the Society of Border Leicester Sheep Breeders.

No. 998 Howie, A. B., Eshott Brocks, Felton, Morpeth, (BL 869) L 2.

**CLASS 116. EWE, above one Shear.—PREMIUMS,**  
£10, £5, £3, and £2.

- 1st No. 986 Moyes, James C., Renmure, Inverkeilor.
- 2nd No. 984 Moyes, H. B., Kilmux, Leven.
- 3rd No. 982 Howie, James, & Sons, Muirside, Dumfries.
- 4th No. 979 Brown, Alexander, Smailholm, Kelso.
- V No. 985 Moyes, H. B., Kilmux, Leven.
- H No. 980 Chalmers, William, Summerfield, Dumfries, (BL 98) J 7.
- C No. 978 Balfour, Colonel E. W. S., D.S.O., O.B.E., M.C., of Balbirnie, Markinch.
- C No. 983 Mansfield Estates, Balboughty, Perth, (BL 81) J 65.

**CLASS 117. SHEARLING EWE or GIMMER.—**  
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 998 Howie, A. B., Eshott Brocks, Felton, Morpeth, (BL 869) L 2.
- 2nd No. 994 Cross, Donald, Knockdon, Maybole, (BL 39) L 4.
- 3rd No. 990 Brown, Alexander, Smailholm, Kelso.
- 4th No. 999 Howie, A. B., Eshott Brocks, Felton, Morpeth, (BL 869) L 4.
- V No. 1002 Moyes, H. B., Kilmux, Leven.
- H No. 1001 Milne, William M., Balbinny, Forfar.
- C No. 987 Balfour, Colonel E. W. S., D.S.O., O.B.E., M.C., of Balbirnie, Markinch.
- C No. 993 Cameron, R. C., Greenlawdean, Greenlaw.
- C No. 995 Cross, Donald, Knockdon, Maybole, (BL 39) L 18.

**CLASS 118. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1009 Barr, Allan, Hobsland, Monkton.
- 2nd No. 1020 Templeton, George, Carnell Home Farm, Hurlford, Kilmarnock.
- 3rd No. 1015 Howie, James, & Sons, Muirside, Dumfries.
- V No. 1010 Brown, Alexander, Smailholm, Kelso.
- H No. 1013 Howie, A. B., Eshott Brocks, Felton, Morpeth.
- C No. 1018 Mansfield Estates, Balboughty, Perth.
- C No. 1019 Milne, William M., Balbinny, Forfar.

## HALF-BRED.

**PRESIDENT'S CHAMPION MEDAL**  
for best pen of Half-Bred Sheep.

No. 1045 M'Laren, William, Fairnington, Roxburgh.

Reserve—No. 1047 Armstrong, Thomas, Eastcote, Hawick.

Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, for the best pen of Half-Bred Sheep, "Extra Stock" eligible to compete. This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 1045 M'Laren, William, Fairnington, Roxburgh.

**CLASS 119. SHEARLING TUP.—PREMIUMS, £10, £7, and £3.**

- 1st No. 1027 Elliot, John, Blackhaugh, Clovenfords.  
 2nd No. 1022 Armstrong, Thomas, Eastcote, Hawick.  
 3rd No. 1026 Elliot, John, Blackhaugh, Clovenfords.  
 V No. 1028 Hogg, George, Penmanshiel, Grantshouse.  
 H No. 1029 Walton, J., Roseden, Wooperton, Northumberland.

**CLASS 120. EWE, above one Shear.—PREMIUMS, £10, £5, and £2.**

- 1st No. 1030 Arnott, John L., Haymount, Kelso.  
 2nd No. 1034 M'Laren, William, Fairnington, Roxburgh.  
 3rd No. 1031 Dodds, William, Clarilaw, Melrose.  
 V No. 1033 Lamb, N. J., East Fleetham, Seahouses.  
 H No. 1032 Dodds, William, Clarilaw, Melrose.

**CLASS 121. SHEARLING EWE or GIMMER.—  
PREMIUMS, £10, £5, and £2.**

- 1st No. 1045 M'Laren, William, Fairnington, Roxburgh.  
 2nd No. 1046 Walton, J., Roseden, Wooperton, Northumberland.  
 3rd No. 1038 Dodds, William, Clarilaw, Melrose.  
 V No. 1044 M'Laren, William, Fairnington, Roxburgh.  
 H No. 1037 Arnott, John L., Haymount, Kelso.  
 C No. 1043 Lamb, N. J., East Fleetham, Seahouses.  
 C No. 1041 Fortune, James, Colstoun Mains, Haddington.

**CLASS 122. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1047 Armstrong, Thomas, Eastcote, Hawick.  
 2nd No. 1053 Hogg, Will, Jun., Clackmae, Earlstoun.  
 3rd No. 1048 Armstrong, Thomas, Eastcote, Hawick.  
 V No. 1051 Hislop, J. R., Darlingfield, Gordon.

**CLASS 123. THREE GIMMERS, clipped after 1st May 1936,  
and showing Clipping Buist.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1054 Arnott, John L., Haymount, Kelso.  
 2nd No. 1056 M'Laren, William, Fairnington, Roxburgh.  
 3rd No. 1055 Dodds, William, Clarilaw, Melrose.  
 V No. 1057 Stewart, William, Craigsford, Earlstoun.

**CLASS 124. THREE EWE LAMBS.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1058 Armstrong, Thomas, Eastcote, Hawick.  
 2nd No. 1060 Hogg, Will, Jun., Clackmae, Earlstoun.

## OXFORD DOWN.

*PRESIDENT'S CHAMPION MEDAL  
for best Oxford Down Sheep.*

No. 1097 Templeton, T. &amp; M., Sandyknowe, Kelso.

*Reserve*—No. 1086 Templeton, T. & M., Sandyknowe, Kelso.**CLASS 125. SHEARLING TUP.**—PREMIUMS, £8, £5, and £3.

1st No. 1068 Templeton, T. &amp; M., Sandyknowe, Kelso.

2nd No. 1071 Willis, G. H., Birdlip, Gloucester.

3rd No. 1061 Bell, John, Balbuthie, Kilconquhar.

V No. 1067 Templeton, T. &amp; M., Sandyknowe, Kelso.

H No. 1066 Lawson, William H., Frithfield, Anstruther.

C No. 1062 Clarkson, Alexander, Skirling Mill, Biggar.

C No. 1064 Kinnaird, John, Papple, Haddington.

**CLASS 126. SHEARLING EWE or GIMMER.**  
PREMIUMS, £8, £5, and £3.

1st No. 1077 Templeton, T. &amp; M., Sandyknowe, Kelso.

2nd No. 1076 Templeton, T. &amp; M., Sandyknowe, Kelso.

3rd No. 1080 Willis, G. H., Birdlip, Gloucester.

V No. 1078 Templeton, T. &amp; M., Sandyknowe, Kelso.

H No. 1072 Arnott, John L., Haymount, Kelso.

C No. 1073 Bell, John, Balbuthie, Kilconquhar.

C No. 1075 Lawson, William H., Frithfield, Anstruther.

**CLASS 127. TUP LAMB.**—PREMIUMS, £8, £5, and £3.

1st No. 1086 Templeton T. &amp; M., Sandyknowe, Kelso.

2nd No. 1081 Bell, John, Balbuthie, Kilconquhar.

3rd No. 1084 Lawson, William H., Frithfield, Anstruther.

V No. 1085 Lawson, William H., Frithfield, Anstruther.

H No. 1083 Lamb, N. J., East Fleetham, Seahouses.

C No. 1090 Willis, G. H., Birdlip, Gloucester.

**CLASS 128. EWE LAMB.**—PREMIUMS, £5, £3, and £2.

1st No. 1097 Templeton, T. &amp; M., Sandyknowe, Kelso.

2nd No. 1095 Lawson, William H., Frithfield, Anstruther.

3rd No. 1100 Willis, G. H., Birdlip, Gloucester.

V No. 1093 Lamb, N. J., East Fleetham, Seahouses.

H No. 1098 Templeton, T. &amp; M., Sandyknowe, Kelso.

C No. 1099 Willis, G. H., Birdlip, Gloucester.

## SUFFOLK.

PRESIDENT'S CHAMPION MEDAL  
for best Suffolk Sheep.

No. 1142 Duncan, Commander J. A., C.B., Parkhill, Arbroath.

Reserve—No. 1130 Prince-Smith, Sir Prince, Bart., Southburn, Driffield, East Yorks.

Silver Challenge Cup, value £15, offered by the Suffolk Sheep Society for best Group of Suffolk Sheep, consisting of one Tup, one shear and over, one Shearling Ewe or Gimmer, one Tup Lamb, and one Ewe Lamb—the Females and Tup Lamb must be bred by Exhibitor—drawn from Classes 129 to 134. Given by the Suffolk Sheep Society.

Nos. 1103, 1121, 1142, 1187 Duncan, Commander J. A., C.B., Parkhill, Arbroath.

**CLASS 129. TUP, one Shear and over.—PREMIUMS, £10, £7, £3, and £1.**

1st No. 1102 Barr, Samuel, Nottylees, Kelso.

2nd No. 1116 Whitton, William G., Ltd., Ingliston, Eassie, Angus, "Meadowbrook Ranger" (24,300).

3rd No. 1113 Rintoul, William, Pratis, Leven.

4th No. 1111 Prince-Smith, Sir Prince, Bart., Southburn, Driffield, East Yorks.

V No. 1115 Sinclair, J. Colin, Mardon, Cornhill-on-Tweed, "Brantham Mardon I." (23,761).

H No. 1112 Rintoul, William, Pratis, Leven, "Ashbocking Humber" (P 23,737).

C No. 1101 Barr, Samuel, Nottylees, Kelso.

C No. 1108 Johnston, W. G., &amp; Son, Kilmundie, Glamis, "Southburn Lampard IV." (24,097).

**CLASS 130. SHEARLING EWE or GIMMER.—**  
PREMIUMS, £10, £5, £2, and £1.

1st No. 1130 Prince-Smith, Sir Prince, Bart., Southburn, Driffield, East Yorks.

2nd No. 1121 Duncan, Commander J. A., C.B., Parkhill, Arbroath.

3rd No. 1131 Prince-Smith, Sir Prince, Bart., Southburn, Driffield, East Yorks.

4th No. 1127 Golightly, William, Whitelaw, Haddington.

V No. 1132 Rintoul, William, Pratis, Leven.

H No. 1122 Duncan, Commander J. A., C.B., Parkhill, Arbroath.

C No. 1133 Ross-Taylor, J. P., Mungoswalls, Duns.

C No. 1138 Whitton, William G., Ltd., Ingliston, Eassie, Angus.

C No. 1137 Whitton, William G., Ltd., Ingliston, Eassie, Angus.

**CLASS 131. TUP LAMB.—PREMIUMS, £10, £5, £2, and £1.**

1st No. 1142 Duncan, Commander J. A., C.B., Parkhill, Arbroath.

2nd No. 1153 Ross-Taylor, J. P., Mungoswalls, Duns.

3rd No. 1156 Whitton, William G., Ltd., Ingliston, Eassie, Angus.

4th No. 1151 Rintoul, William, Pratis, Leven.

V No. 1150 Prince-Smith, Sir Prince, Bart., Southburn, Driffield, East Yorks.

H No. 1152 Rintoul, William, Pratis, Leven.

C No. 1155 Whitton, William G., Ltd., Ingliston, Eassie, Angus.

C No. 1149 Prince-Smith, Sir Prince, Bart., Southburn, Driffield, East Yorks.

C No. 1141 Duncan, Commander J. A., C.B., Parkhill, Arbroath.



**CLASS 132. EWE LAMB.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1172 Whitton, William G., Ltd., Ingliston, Eassie, Angus.  
 2nd No. 1173 Whitton, William G., Ltd., Ingliston, Eassie, Angus.  
 3rd No. 1167 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East  
 Yorks.  
 V No. 1159 Duncan, Commander J. A., C.B., Parkhill, Arbroath.  
 H No. 1162 Golightly, William, Whitelaw, Haddington.  
 C No. 1166 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East  
 Yorks.  
 C No. 1169 Rintoul, William, Pratis, Leven.  
 C No. 1168 Rintoul, William, Pratis, Leven.

**CLASS 133. TUP LAMB—untrimmed.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1181 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East  
 Yorks.  
 2nd No. 1180 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East  
 Yorks.  
 3rd No. 1184 Stewart, William, Craigsford, Earlstoun.  
 V No. 1176 Duncan, Commander J. A., C.B., Parkhill, Arbroath.  
 H No. 1174 Barr, Samuel, Nottylees, Kelso.  
 C No. 1179 Golightly, William, Whitelaw, Haddington.

**CLASS 134. EWE LAMB—untrimmed.—PREMIUMS, £5, £3, and £2.**

- 1st No. 1187 Duncan, Commander J. A., C.B., Parkhill, Arbroath.  
 2nd No. 1191 Johnston, W. G., & Son, Kilmundie, Glamis.  
 3rd No. 1186 Duncan, Commander J. A., C.B., Parkhill, Arbroath.  
 V No. 1192 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East  
 Yorks.  
 H No. 1188 Fraser, Hugh, Linton Burnfoot, Kelso.  
 C No. 1193 Prince-Smith, Sir Prince, Bart., Southburn, Driffeld, East  
 Yorks.

**WENSLEYDALE LONGWOOL.****PRESIDENT'S CHAMPION MEDAL**  
*for best Wensleydale Longwool Sheep.*

- No. 1197 Dargue, John, Burneside Hall, Kendal, Westmorland.  
 Reserve—No. 1202 Dargue, John, Burneside Hall, Kendal, Westmorland.

**CLASS 135. SHEARLING TUP.—PREMIUMS, £6, £4, and £2.**

- 1st No. 1197 Dargue, John, Burneside Hall, Kendal, Westmorland.  
 2nd No. 1198 Dargue, John, Burneside Hall, Kendal, Westmorland.  
 3rd No. 1200 Smalley, J. B., Birkby Hall, Cark-in-Cartmel.  
 V No. 1199 Smalley, J. B., Birkby Hall, Cark-in-Cartmel.

**CLASS 136. SHEARLING EWE or GIMMER.—PREMIUMS,**  
*£5, £3, and £2.*

- 1st No. 1202 Dargue, John, Burneside Hall, Kendal, Westmorland.  
 2nd No. 1201 Dargue, John, Burneside Hall, Kendal, Westmorland.  
 3rd No. 1203 Smalley, J. B., Birkby Hall, Cark-in-Cartmel.  
 V No. 1205 Walker, J. B., Boarbank Hall Home Farm, Grange-over-Sands.  
 H No. 1204 Smalley, J. B., Birkby Hall, Cark-in-Cartmel.

**FAT SHEEP.**

*PRESIDENT'S CHAMPION MEDAL*  
*for best pen of Fat Sheep.*

- No. 1206 Blythe, Charles, & Sons, Barberfield, Haddington, (Suffolk).  
*Reserve*—No. 1207 Blythe, Charles, & Sons, Barberfield, Haddington,  
 (Suffolk Tup—Half-Bred Ewes).

**CLASS 137. THREE FAT LAMBS, any breed or cross, dropped in**  
*the year of the Show.—PREMIUMS, £5, £3, and £2.*

- 1st No. 1206 Blythe, Charles, & Sons, Barberfield, Haddington, (Suffolk).  
 2nd No. 1207 Blythe, Charles, & Sons, Barberfield, Haddington, (Suffolk  
 Tup—Half-Bred Ewes).  
 3rd No. 1209 Templeton, T. & M., Sandyknowe, Kelso, (Oxford Down  
 Tup—Half-bred Ewes).

**SHEPHERDS' PACK SHEEP.**

**BLACKFACE.**

- CLASS 138.** }  
**CLASS 139.** } Cancelled owing to insufficient entries (Regulation 12).  
**CLASS 140.** }

**CHEVIOT.**

*Silver Medal for best Cheviot Sheep.*

- No. 1210 Carruthers, Robert, Sen., Attonburn, Yetholm, Kelso.

**CLASS 141. EWE, above one Shear, with her Lamb at foot.—**  
**PREMIUMS, £3, £2, and £1.**

- 1st No. 1210 Carruthers, Robert, Sen., Attonburn, Yetholm, Kelso.  
 2nd No. 1213 Scott, William, Chatto, Kelso.  
 3rd No. 1211 Carruthers, Robert, Jun., Attonburn, Yetholm, Kelso.  
 V No. 1214 Storie, James, Cocklawfoot, Mowhaugh, Kelso.

**CLASS 142. SHEARLING EWE or GIMMER.—**  
**PREMIUMS, £3, £2, and £1.**

- 1st No. 1220 Storie, James, Cocklawfoot, Mowhaugh, Kelso.  
 2nd No. 1216 Carruthers, Robert, Jun., Attonburn, Yetholm, Kelso.  
 3rd No. 1219 Scott, William, Chatto, Kelso.

**CLASS 143. EWE LAMB.—PREMIUMS, £3, £2, and £1.**

- 1st No. 1221 Anderson, George, Glenormiston, Innerleithen, Peebles-shire.  
 2nd No. 1222 Carruthers, Robert, Sen., Attonburn, Yetholm, Kelso.  
 3rd No. 1225 Scott, William, Chatto, Kelso.

**HALF-BRED.**

*Silver Medal for best Half-Bred Sheep.*

- No. 1229 Fraser, R. S., Thornington, Mindrum, Northumberland.

**CLASS 144. EWE, above one Shear, with her Lamb at foot.—**  
**—PREMIUMS, £3, £2, and £1.**

- 1st No. 1229 Fraser, R. S., Thornington, Mindrum, Northumberland.  
 2nd No. 1231 Laidlaw, Robert, Pirnie, Fairnington, Roxburgh.  
 3rd No. 1228 Fraser, R. S., Thornington, Mindrum, Northumberland.  
 V No. 1230 Kerr, John, Clarilaw, Melrose.

**CLASS 145. SHEARLING EWE or GIMMER.—**  
**PREMIUMS, £3, £2, and £1.**

- 1st No. 1238 Laidlaw, Robert, Pirnie, Fairnington, Roxburgh.  
 2nd No. 1235 Fraser, R. S., Thornington, Mindrum, Northumberland.  
 3rd No. 1232 Croudace, Charles, Roseden, Wooperton, Northumberland.  
 V No. 1234 Fleming, J. H., Laverock Law, Lowick, Berwick-in-Tweed.  
 H No. 1236 Fraser, R. S., Thornington, Mindrum, Northumberland.  
 C No. 1237 Kerr, John, Clarilaw, Melrose.

**CLASS 146. EWE LAMB.—PREMIUMS, £3, £2, and £1.**

- 1st No. 1239 Fleming, H. B., Hetton Law, Lowick, Berwick-on-Tweed.  
 2nd No. 1240 Fleming, J. H., Laverock Law, Lowick, Berwick-on-Tweed.  
 3rd No. 1244 Young, William, Clackmae, Earlston, Berwickshire.  
 V No. 1243 Laidlaw, Robert, Pirnie, Fairnington, Roxburgh.  
 H No. 1241 Fraser, R. S., Thornington, Mindrum, Northumberland.  
 C No. 1242 Kerr, John, Clarilaw, Melrose.

## GOATS

### *PRESIDENT'S CHAMPION MEDAL for best Animal in the Goat Classes.*

No. 1251 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista" (BA 1099).

*Reserve*—No. 1246 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Honesty" (BA 1102).

The Competition for Goats is recognised by the British Goat Society, Roydon Road, Diss, Norfolk, which will give Challenge Certificates (qualifying for a Championship) :—

#### *For the best Female Goat over two years that has borne a kid—*

No. 1251 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista" (BA 1099).

#### *For the best dual purpose Goat over two years that has borne a kid—*

No. 1249 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British Toggenburg), "Dainty of Swanston Q\*" (BT 163).

#### *A Bronze Medal for the best female exhibit in Classes 147 to 152 inclusive.*

No. 1251 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista" (BA 1099).

Challenge Cup, value 20 Guineas, *for the best Female Goat in the Show.*  
Given by the late Lord Dewar, London.

No. 1251 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista" (BA 1099).

**CLASS 147. FEMALE GOAT**, any age, in Milk, entered in or eligible for the Toggenburg Section or the British Toggenburg or British Alpine Section or Register of the Herd-Book.—**PREMIUMS**, £3, £2, and £1.

1st No. 1248 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British Alpine), "Cokoatta Q\*" (BA 195).

2nd No. 1246 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Honesty" (BA 1102).

3rd No. 1245 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Harpist" (BA 1101).

V No. 1249 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British Toggenburg), "Dainty of Swanston Q\*" (BT 163).

H No. 1250 Thomson, Mrs L., 1 Craigieknowes Road, Craigie, Perth (British Alpine), "Couplet" (BA 359).

**EXTRA STOCK.**

The following was awarded the £3 Prize :—

- No. 1251 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista" (BA 1099).

**CLASS 148. FEMALE GOAT**, any age, in Milk, entered in or eligible for the Saanen Section or the British Saanen Section or Register of the Herd-Book.—PREMIUMS, £3, £2, and £1.

- 1st No. 1253 Hendy, Mrs. Etherley, Bishop Auckland, Co. Durham (Saanen), "Dissington Silvia" (S 261).  
3rd No. 1252 Blair, Mrs W. E., Blairholm Goat and Poultry Farm, Kirknewton, Midlothian (British Saanen), "Foulden Joyce" (BS 486).

**CLASS 149. FEMALE GOAT**, any age, in Milk. Any other variety. PREMIUMS, £3, £2, and £1.

*Not forward.*

**EXTRA STOCK.**

The following was awarded the £2 Prize :—

- No. 1255 Thomson, Mrs L., 1 Craigieknowes Road, Craigie, Perth (British), "Cobalt Couplet Q\*" (9364).

**CLASS 150. GOATLING**, over one but not exceeding two years, entered in or eligible for the Toggenburg Section or the British Toggenburg or British Alpine Section or Register of the Herd-Book.—PREMIUMS, £3, £2, and £1.

- 1st No. 1258 Hendy, Mrs. Etherley, Bishop Auckland, Co. Durham (Toggenburg), "Etherley Myha" (T 807).  
2nd No. 1257 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Irene" (BA 1107).  
3rd No. 1259 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British Toggenburg), "Kinneddar Crooner" (11,996).  
V No. 1256 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Iris" (BA 1106).

**CLASS 151. GOATLING**, over one but not exceeding two years, Any other variety.—PREMIUMS, £3, £2, and £1.

- 1st No. 1260 Hendy, Mrs. Etherley, Bishop Auckland, Co. Durham (Saanen), "Middleton Myrtle" (S 287).

**CLASS 152. FEMALE KID**, not exceeding one year. Any variety. —PREMIUMS, £3, £2, and £1.

- 1st No. 1265 Miller, Miss Kathrine, Lawmuir, Methven, Perth (British), "Lawmuir Change."  
2nd No. 1263 Hendy, Mrs. Etherley, Bishop Auckland, Co. Durham (Anglo-Nubian), "Etherley Stellina" (AN 2464).  
3rd No. 1268 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British Toggenburg), "Precious of Swanston" (BT 259).  
V No. 1264 Hendy, Mrs. Etherley, Bishop Auckland, Co. Durham (Anglo-Nubian), "Etherley Dream" (AN 2463).  
H No. 1269 Thomson, Mrs L., 1 Craigieknowes Road, Craigie, Perth (British), "Clematis of Craigie" (12,568).

**CLASS 153. MALE KID, not exceeding one year. Any variety.—**  
**PREMIUMS, £3, £2, and £1.**

- 1st No. 1272 Hendy, Mrs. Etherley, Bishop Auckland, Co. Durham (Anglo-Nubian), "Theydon Bellboy" (AN 2469).  
 2nd No. 1273 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British), "Kinneddar Crow" (12,553).  
 3rd No. 1270 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Jonquil" (BA 1151).  
 V No. 1271 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Jacobea" (BA 1149).

**CLASS 154. MILKING COMPETITION, for quality, open to**  
**Classes 147, 148, and 149.—PREMIUMS, £3, £2, and £1.**

- 1st No. 1249 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British Toggenburg), "Dainty of Swanston Q\*" (BT 163).  
 2nd No. 1248 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate, (British Alpine), "Cokoatta Q\*" (BA 195).  
 3rd No. 1255 Thomson, Mrs L., 1 Craigieknowes Road, Craigie, Perth (British), "Cobalt Couplet Q\*" (9364).  
 V No. 1250 Thomson, Mrs L., 1 Craigieknowes Road, Craigie, Perth (British Alpine), "Couplet" (BA 359).

**CLASS 155. MILKING COMPETITION, for quantity, open to**  
**Classes 147, 148, and 149.—PREMIUMS, £3, £2, and £1.**

- 1st No. 1249 Swan, Miss Elinor, Harmony House, Eden Lane, Churchhill, Edinburgh (British Toggenburg), "Dainty of Swanston Q\*" (BT 163).  
 2nd No. 1248 Paisley, Mrs T. Leo, Parkhurst, Park Road, Harrogate (British Alpine), "Cokoatta Q\*" (BA 195).  
 3rd No. 1251 Forteviot, Margaret, Lady, Galloway House, Garlieston, Wigtownshire (British Alpine), "Dupplin Genista" (BA 1099).  
 V No. 1255 Thomson, Mrs L., 1 Craigieknowes Road, Craigie, Perth (British), "Cobalt Couplet Q\*" (9364).

## PIGS

## LARGE WHITE.

## PRESIDENT'S CHAMPION MEDAL

*for best Large White Pig.*

No. 1302 Cowper, John E. B., Gogar Mains, Edinburgh, "Whittingham Hilda 21st" (240,236) (Ear No. 2232).

*Reserve*—No. 1310 Elder, Captain A. J., City Mills, Dunfermline, "Touch Lady Topsy 12th" (239,014) (Ear No. 787).

Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, *for the best Large White Pig, "Extra Stock" eligible to compete.* This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 1302 Cowper, John E. B., Gogar Mains, Edinburgh, "Whittingham Hilda 21st" (240,236) (Ear No. 2232).

Gold Medal, value £5 (or cash), *for best Large White Boar, "Extra Stock" eligible to compete.* Given by the National Pig-Breeders' Association.

No. 1279 Elder, Captain A. J., City Mills, Dunfermline, "Aldenham Bradbury 25th" (82,799) (Ear No. 5667).

Special Prizes of £5, £3, and £2 *for Groups of four Large White Pigs bred by Exhibitor. One Boar (at least) must be included in the Group, and not more than one entry to be selected from any one Class. "Extra Stock" eligible to compete.* Given by the National Pig-Breeders' Association.

1st Nos. 1274, 1311, 1323, 1333 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife.

2nd Nos. 1277, 1290, 1291, 1306 Hallas, W., Bank House Farm, Helsby, Warrington.

3rd Nos. 1288, 1310, 1313, 1327 Elder, Captain A. J., City Mills, Dunfermline.

**CLASS 156. BOAR, born before 1935.—PREMIUMS,**  
£8, £4, and £2.

1st No. 1276 Hallas, W., Bank House Farm, Helsby, Warrington, "Aldenham King Bradbury 3rd" (82,823) (Ear No. 5617).

2nd No. 1277 Hallas, W., Bank House Farm, Helsby, Warrington, "Hallastone Bradbury 40th" (94,073) (Ear No. 3513).

3rd No. 1275 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, "Creek Kitchener 52nd" (88,129) (Ear No. 80).

**EXTRA STOCK.**

The following was awarded the £3 Prize :—

No. 1279 Elder, Captain A. J., City Mills, Dunfermline, "Aldenham Bradbury 25th" (82,799) (Ear No. 5667).

**CLASS 157.** BOAR, born in 1935 before 1st July.—PREMIUMS,  
£8, £4, and £2.

- 1st No. 1280 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Prince Charlie 4th" (93,979) (Ear No. 4815).  
2nd No. 1283 Wilson-Smith, Dr W. A., Cumledge Piggeries, Duns, "Cumledge Chieftain 3rd" (Ear No. 199).  
3rd No. 1281 Ferguson, W. & J., Newtown Dairy, Kirkcaldy, "Raith Tom Boy 3rd" (Ear No. 60).  
V No. 1282 Wilson-Smith, Dr W. A., Cumledge Piggeries, Duns, "Cumledge Chieftain 2nd" (Ear No. 198).

**CLASS 158.** BOAR, born in 1935 on or after 1st July.—PREMIUMS,  
£6, £4, and £2.

- 1st No. 1290 Hallas, W., Bank House Farm, Helsby, Warrington, "Hallastone Masterpiece 2nd" (Ear No. 3751).  
2nd No. 1291 Hallas, W., Bank House Farm, Helsby, Warrington, "Hallastone Premier 62nd" (Ear No. 3768).  
3rd No. 1286 Cox, James Ernest, Methven Castle, Methven, "Methven Kingmaker 3rd" (Ear No. 661).  
V No. 1284 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Mandate 11th" (Ear No. 5109).  
H No. 1289 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, "Halbeath Jason 10th" (Ear No. 881).

**CLASS 159.** BOAR, born in 1936.—PREMIUMS, £6, £3, and £1.

- 1st No. 1295 Cox, James Ernest, Methven Castle, Methven, (Ear No. 763).  
2nd No. 1300 Taylor, G. C., Moncur, Inchtute, Perthshire, "Moncur Jay 4th" (Ear No. 499).  
3rd No. 1299 Stodart, J. A., Kingston, North Berwick, (Ear No. 149).  
V No. 1296 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, (Ear No. 922).

Gold Medal, value £5 (or cash), for best Large White Sow, "*Extra Stock*" eligible to compete. Given by the National Pig-Breeders' Association.

- No. 1302 Cowper, John E. B., Gogar Mains, Edinburgh, "Whittingham Hilda 21st" (240,236) (Ear No. 2232).

**CLASS 160.** SOW, born before 1935.—PREMIUMS, £8, £4, and £2.

- 1st No. 1302 Cowper, John E. B., Gogar Mains, Edinburgh, "Whittingham Hilda 21st" (240,236) (Ear No. 2232).  
2nd No. 1304 Elder, Captain A. J., City Mills, Dunfermline, "Spalding Belle 52nd" (225,068) (Ear No. 2257).  
3rd No. 1303 Cox, James Ernest, Methven Castle, Methven, "Methven Buttercup 4th" (235,920) (Ear No. 403).  
V No. 1307 M'Nair, G. & H., Lewisville, Musselburgh, "Histon East Lass 80th" (234,502) (Ear No. 463).

**EXTRA STOCK.**

The following was awarded the £3 Prize:—

- No. 1310 Elder, Captain A. J., City Mills, Dunfermline, "Touch Lady Topsy 12th" (239,014) (Ear No. 787).



**CLASS 161.** SOW, born in 1935 before 1st July.—PREMIUMS, £8, £4, and £2.

- 1st No. 1317 Taylor, G. C., Moncur, Inchture, Perthshire, "Moncur Kate 10th" (248,928) (Ear No. 268).  
 2nd No. 1314 Ferguson, W. & J., Newtown Dairy, Kirkcaldy, (Ear No. 63).  
 3rd No. 1312 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Queen Mary 3rd" (Ear No. 4872).  
 V No. 1311 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, "Cults Viola 3rd" (Ear No. 1264).  
 H No. 1316 Milne, John, Upper Affloch, Dunecht, Aberdeenshire, "Affloch Sunray 46th" (242,038) (Ear No. 179).  
 C No. 1315 Ferguson, W. & J., Newtown Dairy, Kirkcaldy, (Ear No. 64).

**CLASS 162.** SOW, born in 1935 on or after 1st July —PREMIUMS, £6, £4, and £2.

- 1st No. 1323 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, (Ear No. 1483).  
 2nd No. 1329 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, "Halbeath Betty 16th" (Ear No. 866).  
 3rd No. 1324 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Maid 6th" (Ear No. 5064).  
 V No. 1327 Elder, Captain A. J., City Mills, Dunfermline, (Ear No. 1263).  
 H No. 1325 Cowper, John E. B., Gogar Mains, Edinburgh, "Gogar Molly 54th" (Ear No. A 5050).

**CLASS 163.** SOW, born in 1936.—PREMIUMS, £6, £3, and £1.

- 1st No. 1333 Cochrane, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, (Ear No. 1745).  
 2nd No. 1338 M'Nair, G. & H., Lewisville, Musselburgh, (Ear No. 250).  
 3rd No. 1339 Taylor, G. C., Moncur, Inchture, Perthshire, "Moncur Kate 13th" (Ear No. 503).  
 V No. 1340 Taylor, G. C., Moncur, Inchture, Perthshire, "Moncur Kate 14th" (Ear No. 505).  
 H No. 1337 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline, (Ear No. 927).

**LARGE BLACK.****PRESIDENT'S CHAMPION MEDAL**  
*for best Large Black Pig.*

- No. 1346 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Monarch 1st" (P 87).  
*Reserve*—No. 1358 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Pakenham Dauntless 3rd" (P 184).

*Silver Medal for the best Large Black Boar.* Given by the Large Black Pig Society.

- No. 1346 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Monarch 1st" (P 87).

**CLASS 184.** BOAR, born before 1936.—PREMIUMS, £8, £4, and £2.

- 1st No. 1341 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Sandy 1st" (N 37).  
 2nd No. 1342 Elder, J. S., East Bearford, Haddington, "Pakenham Bodyline 1st" (M 223).

**CLASS 185.** BOAR, born in 1936.—PREMIUMS, £6, £3, and £1.

- 1st No. 1346 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Monarch 1st" (P 87).  
 2nd No. 1345 Elder, J. S., East Bearford, Haddington, "Bearford Leader" (P 31).  
 3rd No. 1344 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Solando 1st" (P 69).

*Silver Medal for the best Large Black Sow.* Given by the Large Black Pig Society.

- No. 1358 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Pakenham Dauntless 3rd" (P 184).

**CLASS 186.** SOW, born before 1935.—PREMIUMS, £8, £4, and £2.

- 1st No. 1348 Elder, J. S., East Bearford, Haddington, "Bearford Moonray" (L 434).  
 2nd No. 1350 Elder, J. S., East Bearford, Haddington, "Bearford Beauty 4th" (M 964).  
 3rd No. 1349 Elder, J. S., East Bearford, Haddington, "Bearford Judy" (M 468).  
 H No. 1351 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Eileen 6th" (H 1610).  
 C No. 1347 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Stella 1st" (G 974).

**CLASS 187.** SOW, born in 1935.—PREMIUMS, £8, £4, and £2.

- 1st No. 1354 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Upwood Model 5th" (N 942).  
 2nd No. 1352 Elder, J. S., East Bearford, Haddington, "Bearford Bountiful 3rd" (N 44).  
 3rd No. 1353 Elder, J. S., East Bearford, Haddington, "Bearford Bountiful 4th" (N 506).

**CLASS 188.** SOW, born in 1936.—PREMIUMS, £6, £3, and £1.

- 1st No. 1358 Warth, E. A., Upwood Hill House, Ramsey, Huntingdon, "Pakenham Dauntless 3rd" (P. 184).  
 2nd No. 1357 Elder, J. S., East Bearford, Haddington, "Bearford Beautiful" (P 90).  
 3rd No. 1355 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Quashed 1st" (P 188).  
 H No. 1356 Cunningham, H., Dolphingstone, Tranent, "Dolphingstone Quashed 2nd" (P 190).

# SCOTTISH BACON PIG COMPETITION.

*The Competition was arranged in three stages, and judging took place in each, namely :—*

*Stage I. The Live Pigs—at the Show.*

*Stage II. Carcasses*

*Stage III. Bacon—Wiltshire Sides* } *at the Bacon Factory, Thornhill, Dumfriesshire.*

*No points were given in Stage I., but separate Prize Money was awarded. All pigs entered were required, however, to go forward for all three stages.*

## STAGE I. PREMIUMS, £4, £3, £2, £1, and £1.

- 1st No. 1 Borland, Robert, Auchencairn, Closeburn, Dumfriesshire (Large White).
- 2nd No. 2 Borland, Robert, Auchencairn, Closeburn, Dumfriesshire (Large White).
- 3rd No. 9 Cox, James Ernest, Methven Castle, Methven (Large White).
- 4th No. 7 Cowper, John E. B., Gogar Mains, Edinburgh (Large White).
- 5th No. 8 Cowper, John E. B., Gogar Mains, Edinburgh (Large White).
- V No. 35 Park, Thomas, Jun., Quarryhall Pig Farm, Strathaven, Lanarkshire (Large White).
- H No. 29 M'Millan, Robert, Oxcgang Farm, Kirkintilloch (Large White).
- C No. 31 M'Nair, G. & H., Lewisville, Musselburgh (Large White).
- C No. 34 Park, Thomas, Jun., Quarryhall Pig Farm, Strathaven, Lanarkshire (Large White).

*The Aggregate points scored in Stages II. and III. constituted the Final Awards, with seven Money Prizes and two Special Prizes : First, £8, Silver Cup, and Silver Medal; Second, £6; Third, £4; Fourth, £3; Fifth, £2; Sixth, £1; and Seventh, £1.*

*Prize Cards were awarded in Stage I. and for the Final Awards.*

*Silver Challenge Cup and Silver Medal for highest Aggregate points scored in Stages II. and III.*

- No. 47 Wilson-Smith, Dr W. A., Cumledge Piggeries, Duns (Large White), 190 points.

## STAGES II. and III. PREMIUMS, £8, £6, £4, £3, £2, £1, and £1.

- 1st No. 47 Wilson-Smith, Dr W. A., Cumledge Piggeries, Duns (Large White). 190 points.
- 2nd No. 46 Wilson-Smith, Dr W. A., Cumledge Piggeries, Duns (Large White). 187 points.
- 3rd No. 30 M'Nair, G. & H., Lewisville, Musselburgh (Large White). 185 points.
- 4th No. 1 Borland, Robert, Auchencairn, Closeburn, Dumfriesshire (Large White). 184 points.
- 5th No. 21 Findlay, Robert, Easter Cadder, Kirkintilloch (Large White). 180 points.
- 6th No. 20 Findlay, Robert, Easter Cadder, Kirkintilloch (Large White). 179 points.
- 7th No. 19 Elgin, The Earl of, K.T., C.M.G., Broomhall, Dunfermline (Large White). 177 points.
- V No. 15 Drumcoyle Farms, Ltd., Coylton, Ayrshire (Large White). 176 points.
- H No. 36 Rennie Brothers, Easterhouse House, Easterhouse, Lanarkshire (Large White). 175 points.
- C No. 24 Gellan, Edward B., Halbeath Pig Farm, Kingseat, Dunfermline (Large White). 174 points.
- C No. 2 Borland, Robert, Auchencairn, Closeburn, Dumfriesshire (Large White). 173 points.

## POULTRY

First Premium—Twenty Shillings. Second Premium—Ten Shillings. In each Class in which there are four or more entries a Third Prize of Five Shillings may be awarded, provided there is sufficient merit in the pens.

Champion Challenge Silver Salver, value £30, for the best exhibit in the Poultry Classes. Given by the late Lord Dewar.

No. 113 Binnie, W., & Son, Garth House, Denny.

Champion Silver Medals are offered as follows :—

1. *Best Cock, any Variety.*

No. 113 Binnie, W., & Son, Garth House, Denny.

2. *Best Hen, any Variety.*

No. 6 Binnie, W., & Son, Garth House, Denny.

3. *Best Cockerel, any Variety.*

No. 173 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks.

4. *Best Pullet, any Variety.*

No. 126 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks.

5. *Best Waterfowl.*

No. 384 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

6. *Best Turkey.*

No. 425 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

7. *Best Utility Bird (Classes 88-102).*

No. 303 Binnie, W., & Son, Garth House, Denny.

### CLASS 1. LEGHORN—White—Cock.

1st No.	1	Binnie, W., & Son, Garth House, Denny.
2nd No.	4	Weir, James, Adisham Court, Adisham, Canterbury.
3rd No.	3	Livingstone, John, Peel Hill, Strathaven.
V No.	2	Binnie, W., & Son, Garth House, Denny.

### CLASS 2. LEGHORN—White—Hen.

1st No.	6	Binnie, W., & Son, Garth House, Denny.
2nd No.	9	Weir, James, Adisham Court, Adisham, Canterbury.
3rd No.	5	Argo, Fred, Bructor Farm, Inverurie.
V No.	8	Rodger, David, Bonnyton Farm, Eaglesham.

**CLASS 3. LEGHORN—White—Cockerel.**

- 1st No. 11 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 10 Arnott, David, Easter Frew, Kippen.  
 3rd No. 12 Livingstone, John, Peel Hill, Strathaven.  
 V No. 14 Weir, James, Adisham Court, Adisham, Canterbury.  
 H No. 13 Rodger, David, Bonnyton Farm, Eaglesham.

**CLASS 4. LEGHORN—White—Pullet.**

- 1st No. 15 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 16 Rodger, David, Bonnyton Farm, Eaglesham.  
 V No. 17 Weir, James, Adisham Court, Adisham, Canterbury.

**CLASS 5. LEGHORN—Any other Colour—Cock.**

- 1st No. 21 Rodger, David, Bonnyton Farm, Eaglesham (Brown).  
 2nd No. 20 M'Pherson, Robert, Drumboy, Drumclog, Strathaven (Brown).  
 3rd No. 18 Brown, Charles D., Ivybank, Kintore (Brown).  
 V No. 19 M'Pherson, Robert, Drumboy, Drumclog, Strathaven (Brown).

**CLASS 6. LEGHORN—Any other Colour—Hen.**

- 1st No. 26 Ross, J. C., Stirling Road, Larbert (Black).  
 2nd No. 22 Brown, Charles D., Ivybank, Kintore (Brown).  
 3rd No. 25 Ross, J. C., Stirling Road, Larbert (Black).  
 V No. 24 M'Pherson, Robert, Drumboy, Drumclog, Strathaven (Brown).  
 H No. 27 Rutherford, A., & Son, Parliament Square, Kinross (Black).  
 C No. 23 Clark, George, 453 Cambusnethan Street, Wishaw (Black).

**CLASS 7. LEGHORN—Any other Colour—Cockerel.**

- 1st No. 28 Hearn, J., Linkinhorne, Callington, Cornwall (Brown).

**CLASS 8. LEGHORN—Any other Colour—Pullet.**

- 1st No. 30 Hearn, J., Linkinhorne, Callington, Cornwall (Brown).

**CLASS 9. MINORCA—Cock.**

- 1st No. 32 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 37 Sandison, A. L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 3rd No. 36 Russell, John, Tinto View, Pettinain, Lanark.  
 V No. 31 Argo, Fred, Bructor Farm, Inverurie.  
 H No. 34 Graham, John, Kirkfield, Lanark.  
 C No. 35 Macgregor, James S., High Street, Greenlaw.

**CLASS 10. MINORCA—Hen.**

- 1st No. 41 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 39 Argo, Fred, Bructor Farm, Inverurie.  
 3rd No. 46 Russell, John, Tinto View, Pettinain, Lanark.  
 V No. 40 Argo, Fred, Bructor Farm, Inverurie.  
 H No. 42 Graham, John, Kirkfield, Lanark.  
 C No. 44 Macgregor, James S., High Street, Greenlaw.

**CLASS 11. MINORCA—Cockerel.**

- 1st No. 48 Arnott, David, Easter Frew, Kippen.  
 2nd No. 49 Binnie, W., & Son, Garth House, Denny.  
 3rd No. 50 Graham, John, Kirkfield, Lanark.

**CLASS 12. MINORCA—Pullet.**

- 1st No. 52 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 53 Graham, John, Kirkfield, Lanark.  
 V No. 54 Macgregor, James S., High Street, Greenlaw.

**CLASS 13. SCOTCH GREY—Cock.**

- 1st No. 59 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 2nd No. 58 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 3rd No. 56 Kelso, Hugh, Roodside Cottage, Pleau.  
 V No. 60 Young, Dr Stephen, 6 Woodside Place, Glasgow.  
 H No. 57 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 C No. 55 Carswell, John, Hazel Bank, 167 Graham's Road, Falkirk.

**CLASS 14. SCOTCH GREY—Hen.**

- 1st No. 66 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 2nd No. 68 Young, Dr Stephen, 6 Woodside Place, Glasgow.  
 3rd No. 64 M'Morran, Alexander, 100 Main Street, Carnwath.  
 V No. 63 Kelso, Hugh, Roodside Cottage, Pleau.  
 H No. 67 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 C No. 69 Young, Dr Stephen, 6 Woodside Place, Glasgow.

**CLASS 15. SCOTCH GREY—Cockerel.**

- 1st No. 71 Hamilton, Thomas, Kirkton Kilns, Bathgate.  
 2nd No. 72 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 V No. 73 Young, Dr Stephen, 6 Woodside Place, Glasgow.

**CLASS 16. SCOTCH GREY—Pullet.**

- 1st No. 76 Young, Dr Stephen, 6 Woodside Place, Glasgow.  
 2nd No. 74 Grant, Alexander, Mid Thorn Farm, Falkirk.  
 3rd No. 75 Ramsay, William, Busbie Farm, Crosshouse, Kilmarnock.  
 V No. 77 Young, Dr Stephen, 6 Woodside Place, Glasgow.

**CLASS 17. PLYMOUTH ROCK—Barred—Cock.**

- 1st No. 80 Slater, William, c/o E. W. Allenby, Three Oaks, Virginia Water, Surrey.  
 2nd No. 78 Orr, James D., Gargunnoch, Stirling.  
 V No. 79 Orr, James D., Gargunnoch, Stirling.

**CLASS 18. PLYMOUTH ROCK—Barred—Hen.**

- 1st No. 83 Orr, James D., Gargunnoch, Stirling.  
 2nd No. 82 Brown, Charles D., Ivybank, Kintore.  
 3rd No. 84 Orr, James D., Gargunnoch, Stirling.  
 V No. 81 Allenby, E. W., Three Oaks, Virginia Water, Surrey.

**CLASS 19. PLYMOUTH ROCK—Barred—Cockerel.**

- 1st No. 86 Orr, James D., Gargunnoch, Stirling.  
 2nd No. 87 Orr, James D., Gargunnoch, Stirling.  
 V No. 85 Belfrage, William C., Aillneuk Poultry Farm, Ashkirk, Selkirk.

**CLASS 20. PLYMOUTH ROCK—Barred—Pullet.**

- 1st No. 88 Orr, James D., Gargunnoch, Stirling.  
 2nd No. 89 Orr, James D., Gargunnoch, Stirling.

**CLASS 21. PLYMOUTH ROCK—Any other Colour—Cock or Cockerel.**

- 1st No. 91 Orr, James D., Gargunnoch, Stirling (Columbian).  
 2nd No. 90 Orr, James D., Gargunnoch, Stirling (Buff).  
 V No. 92 Ronald, John R., Dorrator, Milnathort (Buff).

**CLASS 22. PLYMOUTH ROCK—Any other Colour—Hen or Pullet.**

- 1st No. 94 Orr, James D., Gargunnoch, Stirling (Buff).  
 2nd No. 93 Allenby, E. W., Three Oaks, Virginia Water, Surrey (Black).  
 V No. 95 Orr, James D., Gargunnoch, Stirling (Columbian).

**CLASS 23. ORPINGTON—Black—Cock or Cockerel.**

- 1st No. 97 Burdett, John, 1 Lake Bank Terrace, Wingate, Co. Durham.  
 2nd No. 98 Orr, James D., Gargunnoch, Stirling.  
 3rd No. 99 Orr, James D., Gargunnoch, Stirling.  
 V No. 96 Brown, Fred, Woodside, Grimscar, Huddersfield.

**CLASS 24. ORPINGTON—Black—Hen or Pullet.**

- 1st No. 102 Orr, James D., Gargunnoch, Stirling.  
 2nd No. 101 Orr, James D., Gargunnoch, Stirling.  
 V No. 100 Burdett, John, 1 Lake Bank Terrace, Wingate, Co. Durham.

**CLASS 25. ORPINGTON—Any other Colour—Cock or Cockerel.**

- 1st No. 104 Reith, Alexander, Barbieston Cottage, Dalrymple, Ayr (Buff).  
 2nd No. 103 Orr, James D., Gargunnoch, Stirling (Blue).

**CLASS 26. ORPINGTON—Any other Colour—Hen or Pullet.**

- 1st No. 106 Orr, James D., Gargunnoch, Stirling (Buff).  
 2nd No. 105 Orr, James D., Gargunnoch, Stirling (Buff).  
 V No. 107 Reith, Alexander, Barbieston Cottage, Dalrymple, Ayr (Buff).

**CLASS 27. WYANDOTTE—Gold or Silver—Cock.**

- 1st No. 109 Spensley, Herbert, Oaks Farm, Menston-in-Wharfedale, Leeds (Silver).  
 2nd No. 108 Morgan, William, Balcurvie, Windygates, Fife (Gold).

**CLASS 28. WYANDOTTE—Gold or Silver—Hen.**

- 1st No. 110 Spenaley, Herbert, Oaks Farm, Menston-in-Wharfedale,  
Leeds (Silver).

**CLASS 29. WYANDOTTE—Gold or Silver—Cockerel.**

- 1st No. 111 Morgan, William, Balcurvie, Windygates, Fife (Gold).

**CLASS 30. WYANDOTTE—Gold or Silver—Pullet.**

(No entry.)

**CLASS 31. WYANDOTTE—White—Cock.**

- 1st No. 113 Binnie, W., & Son, Garth House, Denny.  
2nd No. 112 Argo, Fred, Bructor Farm, Inverurie.  
3rd No. 114 Rodger, David, Bonnyton Farm, Eaglesham.  
V No. 115 Russell, John, Tinto View, Pettinain, Lanark.

**CLASS 32. WYANDOTTE—White—Hen.**

- 1st No. 117 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton,  
Yorks.  
2nd No. 116 Binnie, W., & Son, Garth House, Denny.  
3rd No. 119 Russell, John, Tinto View, Pettinain, Lanark.  
V No. 118 Rodger, David, Bonnyton Farm, Eaglesham.

**CLASS 33. WYANDOTTE—White—Cockerel.**

- 1st No. 122 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton,  
Yorks.  
2nd No. 121 Binnie, W., & Son, Garth House, Denny.

**CLASS 34. WYANDOTTE—White—Pullet.**

- 1st No. 126 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton,  
Yorks.  
2nd No. 128 Lyle, Lady, Glendelvine, Murthly.

**CLASS 35. WYANDOTTE—Partridge—Cock or Cockerel.**

- 1st No. 129 Argo, Fred, Bructor Farm, Inverurie.  
2nd No. 130 Brown, Charles D., Ivybank, Kintore.

**CLASS 36. WYANDOTTE—Partridge—Hen or Pullet.**

- 1st No. 132 Brown, Charles D., Ivybank, Kintore.  
2nd No. 133 Smales, L. H., Arundel Howe, Whitby.

**CLASS 37. WYANDOTTE—Columbian—Cock or Cockerel.**

- 1st No. 135 Brown, Fred, Woodside, Grimscar, Huddersfield.  
2nd No. 136 Brown, Fred, Woodside, Grimscar, Huddersfield.



**CLASS 38. WYANDOTTE—Columbian—Hen or Pullet.**

1st No. 138 Brown, Fred, Woodside, Grimscar, Huddersfield.

**CLASS 39. WYANDOTTE—Any other colour—Cock or Cockerel.**

(No entry.)

**CLASS 40. WYANDOTTE—Any other Colour—Hen or Pullet.**

(No entry.)

**CLASS 41. RHODE ISLAND RED—Cock.**

1st No. 146 Morgan, William, Balcurvie, Windygates, Fife.  
 2nd No. 144 Brown, Charles D., Ivybank, Kintore.  
 3rd No. 147 Rodger, David, Bonnyton Farm, Eaglesham.  
 V No. 142 Argo, Fred, Bructor Farm, Inverurie.  
 H No. 141 Allan, William, Newcastle Farm, Halbeath, Dunfermline.  
 C No. 145 Clark, George, 453 Cambusnethan Street, Wishaw.

**CLASS 42. RHODE ISLAND RED—Hen.**

1st No. 151 Morgan, William, Balcurvie, Windygates, Fife.  
 2nd No. 153 Rodger, David, Bonnyton Farm, Eaglesham.  
 3rd No. 148 Allan, William, Newcastle Farm, Halbeath, Dunfermline.  
 V No. 150 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks.  
 H No. 152 Penny, James G., Sauchie Poultry Farm, Crieff.  
 C No. 149 Dickson, John H., Howlet's Ha', Gordon, Berwickshire.

**CLASS 43. RHODE ISLAND RED—Cockerel.**

1st No. 157 Shewan, Alexander, Longhillock, Alves, Forres.  
 2nd No. 154 Argo, Fred, Bructor Farm, Inverurie.  
 3rd No. 155 Dickson, John H., Howlet's Ha', Gordon, Berwickshire.

**CLASS 44. RHODE ISLAND RED—Pullet.**

1st No. 160 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 163 Shewan, Alexander, Longhillock, Alves, Forres.  
 3rd No. 162 Rodger, David, Bonnyton Farm, Eaglesham.  
 V No. 159 Dickson, John H., Howlet's Ha', Gordon, Berwickshire.

**CLASS 45. SUSSEX—Light—Cock.**

1st No. 165 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks.  
 2nd No. 166 Morgan, William, Balcurvie, Windygates, Fife.  
 3rd No. 167 Rodger, David, Bonnyton Farm, Eaglesham.

**CLASS 46. SUSSEX—Light—Hen.**

1st No. 169 Rodger, David, Bonnyton Farm, Eaglesham.  
 2nd No. 168 Morgan, William, Balcurvie, Windygates, Fife.  
 V No. 170 White, James, Buchanan Home Farm, Drymen.

**CLASS 47. SUSSEX—Light—Cockerel.**

- 1st No. 173 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton,  
Yorks.  
2nd No. 171 Argo, Fred, Bructor Farm, Inverurie.  
3rd No. 174 Rodger, David, Bonnyton Farm, Eaglesham.  
V No. 172 Argo, Fred, Bructor Farm, Inverurie.  
H No. 175 White, James, Buchanan Home Farm, Drymen.

**CLASS 48. SUSSEX—Light—Pullet.**

- 1st No. 178 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton,  
Yorks.  
2nd No. 176 Argo, Fred, Bructor Farm, Inverurie.  
3rd No. 179 Rodger, David, Bonnyton Farm, Eaglesham.  
V No. 180 White, James, Buchanan Home Farm, Drymen.

**CLASS 49. SUSSEX—Any other Variety—Cock.**

- 1st No. 182 Morgan, William, Balcurvie, Windygates, Fife (White).  
2nd No. 181 Greenhow & Hartley, Galaberry Poultry Farm, Annan  
(White).

**CLASS 50. SUSSEX—Any other Variety—Hen.**

- 1st No. 183 Greenhow & Hartley, Galaberry Poultry Farm, Annan  
(White).  
2nd No. 184 Morgan, William, Balcurvie, Windygates, Fife (White).

**CLASS 51. SUSSEX—Any other Variety—Cockerel.**

(No Entry.)

**CLASS 52. SUSSEX—Any other Variety—Pullet.**

- 1st No. 186 Greenhow & Hartley, Galaberry Poultry Farm, Annan  
(White).

**CLASS 53. DORKING—Coloured—Cock.**

- 1st No. 187 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 54. DORKING—Coloured—Hen.**

- 1st No. 188 Major, A. J., Ditton, Langley, Buckinghamshire.  
2nd No. 189 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 55. DORKING—Coloured—Cockerel.**

- 1st No. 190 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 56. DORKING—Coloured—Pullet.**

- 1st No. 191 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 57. DORKING—Silver Grey—Cock.**

- 1st No. 193 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 194 Mechie, John, Upper Greens, Auchtermuchty.  
 V No. 192 Bryce, William, Snaigow, Murthly.

**CLASS 58. DORKING—Silver Grey—Hen.**

- 1st No. 195 Bryce, William, Snaigow, Murthly.  
 2nd No. 198 Mechie, John, Upper Greens, Auchtermuchty.  
 3rd No. 197 Mechie, John, Upper Greens, Auchtermuchty.  
 V No. 196 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 59. DORKING—Silver Grey—Cockerel.**

- 1st No. 199 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 200 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 60. DORKING—Silver Grey—Pullet.**

- 1st No. 202 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 203 Major, A. J., Ditton, Langley, Buckinghamshire.  
 3rd No. 205 Walker, John & William, Skinners Steps, Cupar, Fife.

**CLASS 61. SCOTS DUMPY—Cock.**

- 1st No. 206 Kerr, J. E., of Harviestoun, Dollar.  
 2nd No. 207 Kerr, J. E., of Harviestoun, Dollar.  
 3rd No. 208 Kerr, J. E., of Harviestoun, Dollar.  
 V No. 209 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 62. SCOTS DUMPY—Hen.**

- 1st No. 210 Kerr, J. E., of Harviestoun, Dollar.  
 2nd No. 211 Kerr, J. E., of Harviestoun, Dollar.  
 3rd No. 212 Kerr, J. E., of Harviestoun, Dollar.  
 V No. 213 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 63. SCOTS DUMPY—Cockerel or Pullet.**

- 1st No. 218 Major, A. J., Ditton, Langley, Buckinghamshire.  
 2nd No. 217 Major, A. J., Ditton, Langley, Buckinghamshire.

**CLASS 64. BARNEVELDER—Cock.**

- 1st No. 219 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 220 Morgan, William, Balcurvie, Windygates, Fife.  
 V No. 221 Williams, David, 115 Nether Street, Kirkcaldy.

**CLASS 65. BARNEVELDER—Hen.**

- 1st No. 223 Binnie, W., & Son, Garth House, Denny.  
 2nd No. 222 Arnott, David, Easter Frew, Kippen.  
 V No. 224 Morgan, William, Balcurvie, Windygates, Fife.

**CLASS 66. BARNEVELDER—Cockerel.**

(Not forward.)

**CLASS 67. BARNEVELDER—Pullet.**

- 1st No. 226 Binnie, W., & Son, Garth House, Denny.

**CLASS 68. INDIAN GAME—Cock.**

- 1st No. 228 Brent, Cecil, Clampit, Callington, Cornwall.  
2nd No. 227 Black, William A. P., Croftfoot, Old Polmont.

**CLASS 69. INDIAN GAME—Hen.**

- 1st No. 231 Brent, Cecil, Clampit, Callington, Cornwall.  
2nd No. 230 Black, William A. P., Croftfoot, Old Polmont.  
3rd No. 229 Black, William A. P., Croftfoot, Old Polmont.

**CLASS 70. INDIAN GAME—Cockerel.**

- 1st No. 233 Black, William A. P., Croftfoot, Old Polmont.  
2nd No. 234 Brent, Cecil, Clampit, Callington, Cornwall.

**CLASS 71. INDIAN GAME—Pullet.**

- 1st No. 236 Brent, Cecil, Clampit, Callington, Cornwall.  
2nd No. 235 Black, William A. P., Croftfoot, Old Polmont.

**CLASS 72. OLD ENGLISH GAME—Cock.**

- 1st No. 241 Telford, W., Breconside, Bampton, Cumberland.  
2nd No. 237 Chapman, Robert, Glenboig, Lanarkshire.  
3rd No. 240 Slater, A., The Old Vicarage, Lythe, Whitby.  
V No. 239 Slater, A., The Old Vicarage, Lythe, Whitby.  
H No. 242 Young, Dr Stephen, 6 Woodside Place, Glasgow.  
C No. 238 Greenhow & Hartley, Galaberry Poultry Farm, Annan.

**CLASS 73. OLD ENGLISH GAME—Hen.**

- 1st No. 243 Chapman, Robert, Glenboig, Lanarkshire.  
2nd No. 246 Slater, A., The Old Vicarage, Lythe, Whitby.  
3rd No. 245 Slater, A., The Old Vicarage, Lythe, Whitby.  
V No. 244 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
H No. 247 Young, Dr Stephen, 6 Woodside Place, Glasgow.

**CLASS 74. OLD ENGLISH GAME—Cockerel.**

- 1st No. 248 Davidson, J. A., King's Meaburn, Penrith.  
2nd No. 249 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
3rd No. 250 Russell, H. T., Arlosh House, Kirkbride, Carlisle.  
V No. 251 Slater, A., The Old Vicarage, Lythe, Whitby.

**CLASS 75. OLD ENGLISH GAME—Pullet.**

- 1st No. 252 Davidson, J. A., King's Meaburn, Penrith.  
2nd No. 253 Greenhow & Hartley, Galaberry Poultry Farm, Annan.

**CLASS 76. BANTAM GAME—Old English—Cock.**

- 1st No. 258 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire.  
 2nd No. 255 Buchanan-Jardine, Master Rupert, Castle Milk, Lockerbie.  
 3rd No. 254 Buchanan-Jardine, Master Rupert, Castle Milk, Lockerbie.  
 V No. 257 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 H No. 259 Stuart, A. D., The Brighthouse, Westfield, Bathgate.  
 C No. 260 Thomson, Robert P., Devon Cottage, George Street, Peebles.

**CLASS 77. BANTAM GAME—Old English—Hen.**

- 1st No. 262 Buchanan-Jardine, Master Rupert, Castle Milk, Lockerbie.  
 2nd No. 267 Stuart, A. D., The Brighthouse, Westfield, Bathgate.  
 3rd No. 266 Newton, Sidney, 1 Arundel Drive, Mansfield, Nottinghamshire.  
 V No. 264 Greenhow & Hartley, Galaberry Poultry Farm, Annan.  
 H No. 261 Buchanan-Jardine, Master Rupert, Castle Milk, Lockerbie.  
 C No. 265 Morgan, William, Balcurvie, Windygates, Fife.

**CLASS 78. BANTAM GAME—Modern—Cock.**

- 1st No. 269 Sandison, A. L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 2nd No. 268 Delaney, James, & Son, Gateside, Fife.

**CLASS 79. BANTAM GAME—Modern—Hen.**

- 1st No. 272 Sandison, A. L., Cowdray Arms Hotel, Echt, Aberdeenshire.  
 2nd No. 270 Delaney, James, & Son, Gateside, Fife.  
 V No. 271 Sandison, A. L., Cowdray Arms Hotel, Echt, Aberdeenshire.

**CLASS 80. BANTAM—Other than Game—Cock.**

- 1st No. 276 Livingstone, John, Peel Hill, Strathaven (Sebright, Silver).  
 2nd No. 274 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 3rd No. 273 Argo, Fred, Bructor Farm, Inverurie (Pekin, Black).  
 V No. 278 Sandison, A. L., Cowdray Arms Hotel, Echt, Aberdeenshire (Minorca).

**CLASS 81. BANTAM—Other than Game—Hen.**

- 1st No. 281 Dalrymple & Son, Meadowview, Lealie, Fife (Minorca).  
 2nd No. 280 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 3rd No. 279 Argo, Fred, Bructor Farm, Inverurie (Pekin, Black).  
 V No. 282 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom (Australorp).

**CLASS 82. BANTAM—Any Variety—Cockerel.**

- 1st No. 285 Buchanan-Jardine, Master Rupert, Castle Milk, Lockerbie (Old English Game).  
 2nd No. 286 Delaney, James, & Son, Gateside, Fife (Wyandotte).

**CLASS 83. BANTAM—Any Variety—Pullet.**

- 1st No. 289 Delaney, James, & Son, Gateside, Fife (Modern Game).  
 2nd No. 287 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 3rd No. 288 Delaney, James, & Son, Gateside, Fife (Wyandotte).

**CLASS 84. ANY OTHER RECOGNISED BREED OF POULTRY —Cock.**

- 1st No. 295 M'Vicar, Daniel, Burnside Cottage, Lennoxton (Gold Poland).  
 2nd No. 292 Cameron, Mrs Allan, Darris, Dores, Inverness (Chilian Jungle Fowl).  
 3rd No. 294 Grant, Alexander, Mid Thorn Farm, Falkirk (Jersey Giant).

**CLASS 85. ANY OTHER RECOGNISED BREED OF POULTRY —Hen.**

- 1st No. 299 Orr, James D., Gargunnoch, Stirling (Welssummer).  
 2nd No. 297 Cameron, Mrs Allan, Darris, Dores, Inverness (Chilian Jungle Fowl).

**CLASS 86. ANY OTHER RECOGNISED BREED OF POULTRY —Cockerel.**

- 1st No. 300 Orr, James D., Gargunnoch, Stirling (Welssummer).

**CLASS 87. ANY OTHER RECOGNISED BREED OF POULTRY —Pullet.**

- 1st No. 301 Orr, James D., Gargunnoch, Stirling (Welssummer).

**UTILITY POULTRY.**

**CLASS 88. LEGHORN—Any Variety—Cock or Cockerel.**

- 1st No. 303 Binnie, W., & Son, Garth House, Denny (White).  
 2nd No. 302 Arnott, David, Easter Frew, Kippen (White).  
 3rd No. 305 Guthrie, Mungo, Commonhead, Kilmarnock (White).  
 V No. 307 M'Pherson, Robert, Drumboy, Drumclog, Strathaven (Brown).  
 H No. 304 Glencross, James H., Artella Cottage, Glenhraig, Fife (Black).  
 C No. 306 Hall, Peter F., Gattonside Mains, Melrose (White).

**CLASS 89. ANY OTHER VARIETY—Light Breed—Cock or Cockerel.**

- 1st No. 309 Binnie, W., & Son, Garth House, Denny (Minorca).  
 2nd No. 308 Arnott, David, Easter Frew, Kippen (Minorca).

**CLASS 90. WYANDOTTE—Any Colour—Cock or Cockerel.**

- 1st No. 311 Binnie, W., & Son, Garth House, Denny (White).  
 2nd No. 310 Argo, Fred, Bructor Farm, Inverurie (White).  
 3rd No. 312 Duffy, Peter, Craig Bank, Stow (White).  
 V No. 317 Smith, D., Stronach Poultry Farm, Brodick, Arran (White).  
 H No. 315 Houliston, John, Craig Bank, Stow (White).  
 C No. 316 Livingstone, John, Peel Hill, Strathaven (White).

**CLASS 91. WELSUMMER—Cock or Cockerel.**

- 1st No. 320 Purdham, James, 47 Harold Street, Currock, Carlisle.  
 2nd No. 318 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.  
 3rd No. 319 Orr, James D., Gargunnoch, Stirling.  
 V No. 321 Purdham, James, 47 Harold Street, Currock, Carlisle.

**CLASS 92. ANY OTHER VARIETY—Heavy Breed—Cock or Cockerel.**

- 1st No. 323 Dickson, John H., Howlet's Ha', Gordon, Berwickshire (Rhode Island Red).  
 2nd No. 326 Rodger, David, Bonnyton Farm, Eaglesham (Rhode Island Red).  
 3rd No. 324 Morgan, William, Balcurvie, Windygates, Fife (Rhode Island Red).  
 V No. 325 Orr, James D., Gargunnoch, Stirling (Plymouth Rock, Buff).  
 H No. 322 Cameron, Mrs Allan, Darris, Dore, Inverness (Barnevelder).  
 C No. 327 White, James, Buchanan Home Farm, Drymen (Light Sussex).

**CLASS 93. LEGHORN—White—Hen or Pullet.**

- 1st No. 328 Arnott, David, Easter Frew, Kippen.  
 2nd No. 329 Binnie, W., & Son, Garth House, Denny.  
 3rd No. 330 Guthrie, Mungo, Commonhead, Kilmarnock.  
 V No. 331 Livingstone, John, Peel Hill, Strathaven.

**CLASS 94. LEGHORN—Any other Colour—Hen or Pullet.**

- 1st No. 334 Penny, James G., Sauchie Poultry Farm, Crieff (Black).  
 2nd No. 332 Clark, George, 453 Cambusnethan Street, Wishaw (Black).  
 V No. 333 Houliston, John, Craig Bank, Stow (Black).

**CLASS 95. WYANDOTTE—Any Colour—Hen or Pullet.**

- 1st No. 337 Binnie, W., & Son, Garth House, Denny (White).  
 2nd No. 340 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks. (White).  
 3rd No. 343 Rodger, David, Bonnyton Farm, Eaglesham (White).  
 V No. 341 Livingstone, John, Peel Hill, Strathaven (White).  
 H No. 335 Argo, Fred, Bructor Farm, Inverurie (White).  
 C No. 339 Guthrie, Mungo, Commonhead, Kilmarnock (White).

**CLASS 96. RHODE ISLAND RED—Hen or Pullet.**

- 1st No. 344 Allan, William, Newcastle Farm, Halbeath, Dunfermline.  
 2nd No. 346 Dickson, John H., Howlet's Ha', Gordon, Berwickshire.  
 3rd No. 348 Morgan, William, Balcurvie, Windygates, Fife.  
 V No. 345 Belfrage, William C., Aillneuk Poultry Farm, Ashkirk, Selkirk.  
 H No. 347 Macgregor, James S., High Street, Greenlaw.

**CLASS 97. BARNEVELDER—Hen or Pullet.**

- 1st No. 349 Binnie, W., & Son, Garth House, Denny.

**CLASS 98. ROCK—Any Colour—Hen or Pullet.**

- 1st No. 356 Orr, James D., Gargunnoch, Stirling (Buff).  
 2nd No. 352 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks. (Barred).  
 3rd No. 354 Morgan, William, Balcurvie, Windygates, Fife (Barred).  
 V No. 355 Orr, James D., Gargunnoch, Stirling (Barred).  
 H No. 351 Dickson, John H., Howlet's Ha', Gordon, Berwickshire (Buff).  
 C No. 350 Belfrage, William C., Aillneuk Poultry Farm, Ashkirk, Selkirk (Barred).

**CLASS 99. WELSUMMER—Hen or Pullet.**

- 1st No. 358 Orr, James D., Gargunnoch, Stirling.  
 2nd No. 359 Orr, James D., Gargunnoch, Stirling.  
 V No. 357 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.

**CLASS 100. ANY OTHER VARIETY—Hen or Pullet.**

- 1st No. 361 Binnie, W., & Son, Garth House, Denny (Minorca).  
 2nd No. 366 Morgan, William, Balcurvie, Windygates, Fife (Light Sussex).  
 3rd No. 364 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks. (Light Sussex).  
 V No. 367 Orr, James D., Gargunnoch, Stirling (Buff Orpington).  
 H No. 363 Grant, Alexander, Mid Thorn Farm, Falkirk (Scotch Grey).  
 C No. 365 Macgregor, James S., High Street, Greenlaw (Minorca).

**CLASS 101. ANY CROSS FOR LAYING PURPOSES—Hen.**

- 1st No. 374 Orr, James D., Gargunnoch, Stirling.  
 2nd No. 372 Dickson, John H., Howlet's Ha', Gordon, Berwickshire.  
 3rd No. 371 Cameron, Mrs Allan, Darris, Dores, Inverness.  
 V No. 373 Hislop, J. R., Darlingfield, Gordon, Berwickshire.  
 H No. 370 Belfrage, William C., Aillneuk Poultry Farm, Ashkirk, Selkirk.

**CLASS 102. ANY CROSS FOR LAYING PURPOSES—Pullet.**

- 1st No. 376 Dickson, John H., Howlet's Ha', Gordon, Berwickshire.  
 2nd No. 377 Hamilton, Thomas, Kirkton Kilns, Bathgate.  
 3rd No. 379 Orr, James D., Gargunnoch, Stirling.  
 V No. 375 Catto, Adam, Poultry Yards, Newmachar.



**CLASS 103. DUCKS—Aylesbury—Drake.**

- 1st No. 381 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 382 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 104. DUCKS—Aylesbury—Duck.**

- 1st No. 384 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 383 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 105. DUCKS—Aylesbury—Drake (Young).**

- 1st No. 386 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 385 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 387 Macgregor, James S., High Street, Greenlaw.

**CLASS 106. DUCKS—Aylesbury—Duck (Young).**

- 1st No. 388 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 389 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 390 Macgregor, James S., High Street, Greenlaw.

**CLASS 107. DUCKS—Orpington—Drake.**

- 1st No. 393 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 394 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 3rd No. 391 Cameron, Mrs Allan, Darris, Dores, Inverness.  
 V No. 392 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.

**CLASS 108. DUCKS—Orpington—Duck.**

- 1st No. 397 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 396 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 395 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.

**CLASS 109. DUCKS—Orpington—Drake (Young).**

- 1st No. 400 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 399 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 110. DUCKS—Orpington—Duck (Young).**

- 1st No. 401 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.  
 2nd No. 403 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 V No. 402 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**CLASS 111. DUCKS—Indian Runner—Drake.**

- 1st No. 404 Argo, Fred, Bructor Farm, Inverurie.  
 2nd No. 405 M'Pherson, Robert, Drumboy, Drumclog, Strathaven.

**CLASS 112. DUCKS—Indian Runner—Duck.**

- 1st No. 406 Argo, Fred, Bructor Farm, Inverurie.  
 2nd No. 407 M'Pherson, Robert, Drumboy, Drumclog, Strathaven.

**CLASS 113. DUCKS—Any other Variety—Drake.**

- 1st No. 408 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom (Muscovy).  
 2nd No. 413 Turnbull, W. B., Allanbank Mill, Chirnside (Muscovy).  
 3rd No. 409 Kemp, G. E., Riddell Mill, Lilliesleaf, Melrose (Khaki-Campbell).  
 V No. 410 Kemp, G. E., Riddell Mill, Lilliesleaf, Melrose (Cayuga).

**CLASS 114. DUCKS—Any other Variety—Duck.**

- 1st No. 414 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom (Cayuga).

**CLASS 115. GEESE—Gander.**

- 1st No. 418 Rottenburg, F. A., of Lochlane, Crieff.  
 2nd No. 416 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.

**CLASS 116. GEESE—Goose.**

- 1st No. 421 Rottenburg, F. A., of Lochlane, Crieff.  
 2nd No. 419 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.

**CLASS 117. TURKEYS—Cock.**

- 1st No. 425 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.  
 2nd No. 426 Rottenburg, F. A., of Lochlane, Crieff.  
 3rd No. 423 Carruthers & Clement, Kirkland, Dunlop.  
 V No. 422 Andrew, Mrs Jessie, South Tulloford, Oldmeldrum.

**CLASS 118. TURKEYS—Hen.**

- 1st No. 430 Hamilton, Thomas, Kirkton Kilns, Bathgate.  
 2nd No. 432 Rottenburg, F. A., of Lochlane, Crieff.  
 3rd No. 428 Fox-Brockbank, A. H., The Croft, Kirksanton, Millom.  
 V No. 431 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

**TABLE POULTRY.**

**CLASS 119. ANY PURE BREED—Cock.**

- 1st No. 433 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 2nd No. 434 Black, William A. P., Croftfoot, Old Polmont (Indian Game).  
 3rd No. 437 Harbottle, Mr and Mrs R. P., Albion House, Great Ayton, Yorks. (Wyandotte, White).

**CLASS 120. ANY PURE BREED—Cockerel.**

- 1st No. 440 Binnie, W., & Son, Garth House, Denny (Wyandotte, White).  
 2nd No. 439 Argo, Fred, Bructor Farm, Inverurie (Light Sussex).  
 3rd No. 441 Black, William A. P., Croftfoot, Old Polmont (Indian Game).

**CLASS 121. ANY CROSS—Cock.**

- 1st No. 443 Allenby, E. W., Three Oaks, Virginia Water, Surrey (Indian Game—Sussex).  
2nd No. 446 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream (Game—Orpington)  
3rd No. 444 Black, William A. P., Croftfoot, Old Polmont (Sussex Cross).

**CLASS 122. ANY CROSS—Cockerel.**

- 1st No. 448 Allenby, E. W., Three Oaks, Virginia Water, Surrey (Indian Game—Sussex).  
2nd No. 450 Oswald, Mrs. Dunnikier House, Kirkcaldy (Indian Game Cross).

**CLASS 123. ANY PURE BREED OR CROSS—Pair of Pullets.**

- 1st No. 453 Black, William A. P., Croftfoot, Old Polmont (Indian Game).  
2nd No. 451 Allenby, E. W., Three Oaks, Virginia Water, Surrey (Indian Game—Sussex)  
3rd No. 454 White, James, Buchanan Home Farm, Drymen (Light Sussex).  
V No. 452 Argo, Fred, Bructor Farm, Inverurie (Light Sussex).

## DAIRY PRODUCE

### CLASS 1. POWDERED BUTTER, not less than 3 lb.— PREMIUMS, £4, £3, £2, and £1.

- |         |   |  |
|---------|---|--|
| 1st No. | 1 | Fleming, Andrew, Threepland, Eaglesham.              |
| 2nd No. | 6 | Monteith, Mrs H., The Island, Bothkennar, Falkirk.   |
| 3rd No. | 9 | Young, William, Dalmoak, Dumbarton.                  |
| 4th No. | 4 | M'Kerrow, Mrs, Nenthorn Dairy, Kelso.                |
| V No.   | 7 | Ramage, Mrs J., Lathallan Dairy, Polmont, Falkirk.   |
| H No.   | 5 | M'Lachlan, W., East Crookedstone, Quarter, Hamilton. |

### CLASS 2. FRESH BUTTER, three 1-lb. lots, to be made up in form of bricks.—PREMIUMS, £4, £3, £2, and £1.

- |         |    |  |
|---------|----|--|
| 1st No. | 10 | Fleming, Andrew, Threepland, Eaglesham.              |
| 2nd No. | 18 | Monteith, Mrs H., The Island, Bothkennar, Falkirk.   |
| 3rd No. | 16 | M'Lachlan, W., East Crookedstone, Quarter, Hamilton. |
| 4th No. | 15 | M'Kerrow, Mrs, Nenthorn Dairy, Kelso.                |
| V No.   | 14 | MacKenzie, Mrs A. W., Upper Tullochgrue, Aviemore.   |
| H No.   | 19 | Ramage, Mrs J., Lathallan Dairy, Polmont, Falkirk.   |

### CLASS 3. CHEDDAR CHEESE, 56 lb. and upwards.— PREMIUMS, £9, £5, £3, £2, and £1.

- |         |    |  |
|---------|----|--|
| 1st No. | 28 | M'Dowall, George, South Boreland, Dunragit.            |
| 2nd No. | 29 | M'Minn, Samuel, Torrs Dairy, Kirkcudbright.            |
| 3rd No. | 25 | Cruickshanks, William, Kirkeoch, Kirkcudbright.        |
| 4th No. | 33 | Simpson, William, Machermore Mains, Newton-Stewart.    |
| 5th No. | 26 | Hogg, Alexander, Upper Senwick, Borgue, Kirkcudbright. |
| V No.   | 31 | Paterson, Joseph, Dromore Dairy, Kirkcudbright.        |
| H No.   | 30 | Milroy, James, Chapelton Dairy, Borgue, Kirkcudbright. |
| C No.   | 32 | Shedden, William, Balgerran, Castle Douglas.           |

### CLASS 4. CHEESE, 14 lb. and under.— PREMIUMS, £5, £3, £2, and £1.

- |         |    |  |
|---------|----|--|
| 1st No. | 39 | M'Dowall, George, South Boreland, Dunragit.            |
| 2nd No. | 40 | M'Minn, Samuel, Torrs Dairy, Kirkcudbright.            |
| 3rd No. | 43 | Simpson, William, Machermore Mains, Newton-Stewart.    |
| 4th No. | 36 | Cruickshanks, William, Kirkeoch, Kirkcudbright.        |
| V No.   | 41 | Paterson, Joseph, Dromore Dairy, Kirkcudbright.        |
| H No.   | 37 | Hogg, Alexander, Upper Senwick, Borgue, Kirkcudbright. |

# EGGS

## CLASS 1. One dozen HEN EGGS, white.—

PREMIUMS, £1, 15s., and 10s.

- 1st No. 12 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- 2nd No. 11 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- 3rd No. 17 Whillans, Mrs J. S., Mossburnford, Jedburgh.
- V No. 16 Struthers, Andrew, East Yardhouses, Carnwath.
- H No. 13 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- C No. 5 Fleming, Andrew, Threepland, Eaglesham.
- C No. 18 Young, Mrs, Dalmoak, Dumbarton.

## CLASS 2. One dozen HEN EGGS, brown.—

PREMIUMS, £1, 15s., and 10s.

- 1st No. 23 Fawkes, Miss Charlotte, Fern Bank Farm, Balsall Common, Coventry.
- 2nd No. 31 Struthers, Andrew, East Yardhouses, Carnwath.
- 3rd No. 34 Young, Mrs, Dalmoak, Dumbarton.
- V No. 33 Whillans, Mrs J. S., Mossburnford, Jedburgh.
- H No. 30 Rough, Miss Jane Findlay, Longbank, Kirriemuir.
- C No. 21 Black, Miss Isa, Croftfoot, Old Polmont, Falkirk.
- C No. 32 Struthers, Andrew, East Yardhouses, Carnwath.

## CLASS 3. One dozen HEN EGGS, tinted.—

PREMIUMS, £1, 15s., and 10s.

- 1st No. 43 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- 2nd No. 47 Struthers, Andrew, East Yardhouses, Carnwath.
- 3rd No. 38 Black, Miss Isa, Croftfoot, Old Polmont, Falkirk.
- V No. 37 Binnie, Miss Jeannie, Garth House, Denny.
- H No. 44 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- C No. 48 Struthers, Andrew, East Yardhouses, Carnwath.
- C No. 51 Young, Mrs, Dalmoak, Dumbarton.

## CLASS 4. One dozen DUCK EGGS.—

PREMIUMS, £1, 15s., and 10s.

- 1st No. 59 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- 2nd No. 58 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- 3rd No. 56 Monteith, Mrs H., The Island, Bothkennar, Falkirk.
- V No. 53 Black, Miss Isa, Croftfoot, Old Polmont, Falkirk.
- H No. 57 Muir, Thomas, Ballencrieff Poultry Farm, Bathgate.
- C No. 52 Belfrage, William C., Aillneuk Poultry Farm, Ashkirk, Selkirk.

## CLASS 5. One dozen TURKEY EGGS.—

PREMIUMS, £1, 15s., and 10s.

- 1st No. 63 Fawkes, Miss Charlotte, Fern Bank Farm, Balsall Common, Coventry.
- 2nd No. 61 Andrew, Mrs Jessie, South Tulloford, Oldmeldrum.
- 3rd No. 65 Younger, Mrs James, Mount Melville, St Andrews.
- C No. 64 Hall, Mrs, Gattonside Mains, Melrose.

# HONEY, &c.

## OPEN CLASSES.

**Silver Cup or Tazza.** Presented by the late Mr R. Y. Howie, Rutherglen. *Awarded to the competitor gaining most points in the Classes for Honey and Wax only, calculated on the following basis: 1st Prize, 3 points; 2nd Prize, 2 points; 3rd Prize, 1 point. In the event of a tie, the competitor having most First Prizes to be adjudged the winner.*

Allan, George C., 7 Springvale Road, Ayr (20 points).

**Silver and Bronze Medals** will be awarded by the Scottish Bee-keepers' Association to the First and Second winners of the greatest number of points in the Classes for Honey and Wax only, calculated on the following basis: 1st Prize, 3 points; 2nd Prize, 2 points; 3rd Prize, 1 point.

**Silver Medal**—Allan, George C., 7 Springvale Road, Ayr (20 points).

**Bronze Medal**—Duguid, Robert, Victoria Cottage, Cornhill, Banffshire (16 points).

**CLASS 1.** Collection of APPLIANCES suitable for a beginner's outfit for Bee-keeping. A card naming all the articles, along with the price at which they will be supplied for one year from date, to be fixed to the exhibit.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 2 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.
- 2nd No. 3 Young, R. & J., Wellington Place, Dunoon.

**CLASS 2.** Best and most complete FRAME HIVE for general use, with any improvements. Unpainted—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 7 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.
- 2nd No. 9 Young, R. & J., Wellington Place, Dunoon.
- 3rd No. 5 Scottish Beehives, Ltd., 18 Mill Street, Perth.
- V No. 6 Smith, William W., 71 High Street, Innerleithen.
- H No. 8 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.

**CLASS 3.** Best and most complete HIVE. Unpainted. Price not to exceed 35s.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 12 Young, R. & J., Wellington Place, Dunoon.
- 2nd No. 10 Oliver, George, Ellangowan, The Green, St Boswells.
- 3rd No. 11 Steele, R., & Brodie, Bee Appliance Works, Wormit, Fife.

**CLASS 4.** Six Sections of COMB HONEY, excluding Heather Honey.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 17 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed.
- 2nd No. 13 Allan, George C., 7 Springvale Road, Ayr.
- 3rd No. 14 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.
- V No. 16 Park, David C., Setonhill, Longniddry.
- H No. 15 Leckie, Rev. R. W., The Manse, Davidson's Mains, Edinburgh.

**CLASS 5.** Six Sections of **HEATHER HONEY**.—  
PREMIUMS, 20s., 15s., and 10s.

- 1st No. 21 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
2nd No. 22 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed.  
3rd No. 20 Allan, George C., 7 Springvale Road, Ayr.

**CLASS 6.** Six Jars of **RUN** or **EXTRACTED LIGHT-COLOURED HONEY**, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 26 Allan, George C., 7 Springvale Road, Ayr.  
2nd No. 30 Jackson, John, Tarlair, Thornhill, Dumfriesshire.  
3rd No. 34 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed.  
V No. 32 M'Dougall, Andrew, Boreland, Lockerbie.  
H No. 28 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
C No. 37 Thomson, Miss Meg, 4 Burn Street, Dalbeattie.

**CLASS 7.** Six Jars of **RUN** or **EXTRACTED MEDIUM** or **DARK-COLOURED HONEY**, excluding Heather Honey, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 38 Allan, George C., 7 Springvale Road, Ayr.  
2nd No. 44 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed.  
3rd No. 43 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.  
V No. 42 Jackson, John, Tarlair, Thornhill, Dumfriesshire.  
H No. 39 Anderson, Gordon, Home Farm, Mayne, Elgin.  
C No. 40 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.

**CLASS 8.** Six Jars of **PRESSED HEATHER HONEY** in liquid form, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 51 Hanslip, C., Glaisnock, Cumnock, Ayrshire.  
2nd No. 48 Edmondson, R., Rothay, Hale Road, Ringway, Altrincham.  
3rd No. 54 Park, Andrew, Broomknowe, Crossford, Carlisle.  
V No. 53 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.  
H No. 55 Thoms, A. R. B., Spring Bank, George Street, Coupar-Angus.  
C No. 47 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
C No. 49 Elder, John, Wester Yardhouses, Carnwath, Lanark.

**CLASS 9.** Six Jars of **GRANULATED HONEY**, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 60 Duffton, Robert, Macdonald Street, Huntly.  
2nd No. 58 Allan, George C., 7 Springvale Road, Ayr.  
3rd No. 61 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
V No. 64 Laird, James, 9 Polnoon Street, Eaglesham.  
H No. 62 Edmondson, R., Rothay, Hale Road, Ringway, Altrincham.  
C No. 70 Thomson, Miss Meg, 4 Burn Street, Dalbeattie.

**CLASS 10.** Two shallow Frames of **COMB HONEY** for extracting purposes.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 72 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
2nd No. 71 Allan, George C., 7 Springvale Road, Ayr.  
3rd No. 74 Park, David C., Setonhill, Longniddry.  
V No. 73 Leckie, Rev. R. W., The Manse, Davidson's Mains, Edinburgh.

**CLASS 11.** Best display of HONEY in any form suitable for a shop window in space 4 feet by 4 feet. Weight of honey not to exceed 40 lb.—PREMIUMS, 60s., 30s., and 20s.

- 1st No. 75 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
2nd No. 76 Smith, William W., 71 High Street, Innerleithen.

**CLASS 12.** Best exhibit of not less than 1 lb. of WAX in any form.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 86 Thomson, Miss Meg, 4 Burn Street, Dalbeattie.  
2nd No. 77 Allan, George C., 7 Springvale Road, Ayr.  
3rd No. 84 Niven, H. L., 3 Monearn Terrace, Banchory.  
V No. 81 Jackson, John, Tarlair, Thornhill, Dumfriesshire.  
H No. 82 Marshall, Charles, Marchfield, Lhanbryde, Morayshire.  
C No. 83 Mundell, Thomas A., Elizafield Cottage, Racks, Dumfries.

**CLASS 13.** Best exhibit of not less than 1 lb. of WAX made into shapes for retail trade and over-counter trade. Convenience in packing to be taken into consideration.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 89 Niven, H. L., 3 Monearn Terrace, Banchory.  
2nd No. 90 Park, David C., Setonhill, Longniddry.  
3rd No. 88 Elliot, Matthew, 42 Ardconnel Street, Inverness.  
V No. 91 Thomson, Miss Meg, 4 Burn Street, Dalbeattie.

**CLASS 14.** OBSERVATORY HIVE, with Queen and Bees—two or more frames.—PREMIUMS, 50s., 30s., and 20s.

- 1st No. 94 Smith, William W., 71 High Street, Innerleithen.  
2nd No. 93 Porter, Andrew, Cleddans Stables, Airdrie.  
3rd No. 92 Birrell, James, 24 King Street, Perth.

**CLASS 15.** OBSERVATORY HIVE, with Queen and Bees—one frame, no super.—PREMIUMS, 40s., 30s., and 15s.

- 1st No. 95 Birrell, James, 24 King Street, Perth.  
2nd No. 97 Smith, William W., 71 High Street, Innerleithen.  
3rd No. 98 Stark John, 42 Main Street, Calderbank, Airdrie.  
V No. 96 Porter, Andrew, Cleddans Stables, Airdrie.

## CONFINED TO SCOTTISH EXHIBITORS.

**CLASS 16.** One standard Frame of COMB HONEY for extracting purposes.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 101 Park, David C., Setonhill, Longniddry.  
2nd No. 99 Allan, George C., 7 Springvale Road, Ayr.

**CLASS 17.** Six Sections of COMB HONEY, excluding Heather Honey.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 104 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
2nd No. 105 Elder, John, Wester Yardhouses, Carnwath, Lanark.  
3rd No. 102 Allan, George C., 7 Springvale Road, Ayr.  
V No. 108 Park, David C., Setonhill, Longniddry.  
H No. 110 Smith, William W., 71 High Street, Innerleithen.  
C No. 107 Oliver, George, Ellangowan, The Green, St Boswells.  
C No. 109 Pate, Thomas, Hopefield, Milnathort.



**CLASS 18.** Six Sections of **HEATHER HONEY**.—  
PREMIUMS, 30s., 20s., and 10s.

- 1st No. 113 Anderson, Gordon, Home Farm, Mayne, Elgin.  
 2nd No. 114 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
 3rd No. 112 Allan, George C., 7 Springfield Road, Ayr.  
 V No. 119 Thoms, John, Holding 37, Lintrose, Coupar-Angus.  
 H No. 117 Smith, William W., 71 High Street, Innerleithen.  
 C No. 116 Pate, Thomas, Hopefield, Milnathort.

**CLASS 19.** Six Jars of **RUN** or **EXTRACTED MEDIUM** or **DARK-COLOURED HONEY**, excluding Heather Honey, approximate weight 6 lb.—PREMIUMS, 30s., 20s., and 10s.

- 1st No. 124 Park, David C., Setonhill, Longniddry.  
 2nd No. 126 Smith, William W., 71 High Street, Innerleithen.  
 3rd No. 120 Allan, George C., 7 Springvale Road, Ayr.  
 V No. 123 Jackson, John, Tarlair, Thornhill, Dumfriesshire.  
 H No. 125 Porter, Andrew, Cleddans Stables, Airdrie.  
 C No. 121 Anderson, Gordon, Home Farm, Mayne, Elgin.  
 C No. 122 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.

**CLASS 20.** Six Jars of **PRESSED HEATHER HONEY** in liquid form, approximate weight 6 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 136 Thorburn, Adam, 115 Glaisnock Street, Cumnock, Ayrshire.  
 2nd No. 131 Hanslip, C., Claisnock, Cumnock, Ayrshire.  
 3rd No. 133 Smith, William W., 71 High Street, Innerleithen.  
 H No. 135 Thoms, John, Holding 37, Lintrose, Coupar-Angus.

**CLASS 21.** Six Jars of **RUN** or **EXTRACTED LIGHT-COLOURED HONEY**, approximate weight 6 lb.—PREMIUMS, 30s., 20s., and 10s.

- 1st No. 146 Pate, Thomas, Hopefield, Milnathort.  
 2nd No. 142 Jackson, John, Tarlair, Thornhill, Dumfriesshire.  
 3rd No. 145 Oliver, George, Ellangowan, The Green, St Boswells.  
 V No. 143 Laird, James, 9 Polnoon Street, Eaglesham.  
 H No. 144 Macdonald, D. G., Kinloch Gardens, Collessie, Fife.  
 C No. 137 Allan, George C., 7 Springvale Road, Ayr.  
 C No. 140 Duguid, Robert, Victoria Cottage, Cornhill, Banffshire.  
 C No. 141 Elder, John, Wester Yardhouses, Carnwath, Lanark.

# RURAL INDUSTRIES

## OPEN CLASSES.

### SHETLAND KNITTING.

*(Exhibits made from Shetland Wool.)*

#### CLASS 1. FINE LACE SHAWL or SCARF.

—PREMIUMS, £3, £2, and £1.

- 1st No. 12 Sinclair, Mrs J., Mid Ayre, Uyeasound, Lerwick (Scarf).
- 2nd No. 1 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Scarf).
- 3rd No. 16 Spence, Miss Annie, Westside, Uyeasound, Shetland (Scarf).
- V No. 13 Sinclair, Miss Patricia, Aithness, Fetlar, Shetland (Scarf).
- H No. 15 Smith, Miss Mary J., Skibhoul, Baltasound, Lerwick (Shawl).
- C No. 8 Robertson, Miss Mary C. S., Coutts Mill, Uyeasound, Shetland (Shawl).

#### CLASS 2. FINE LACE GOODS OTHER THAN ABOVE.—

PREMIUMS, £3, £2, and £1.

- 1st No. 18 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Jumper).
- 2nd No. 26 Hunter, Mrs J. J., Clivocast, Uyeasound, Shetland (Baby's Matinee Coat).
- 3rd No. 25 Humphrey, Mrs, Luidagarth, Uyeasound, Lerwick (Jumper).
- V No. 19 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Camisole).
- H No. 21 Gilbertson, Mrs, Muness, Uyeasound, Lerwick (Jumper).
- C No. 24 Hughson, Mrs M., Dandies, Uyeasound, Shetland (Jumper).

#### CLASS 3. JUMPER or CARDIGAN—with or without Sleeves.—

PREMIUMS, £3, £2, and £1.

- 1st No. 40 Henry, Mrs S., Moy, Co. Tyrone, North Ireland (Jumper).
- 2nd No. 45 Johnstone, Miss Ruby J. A., West Houlland, Bridge of Walls, Shetland (Jumper).
- 3rd No. 69 Tait, Mrs Thomas J., Valleyfield, Aith, Aithsting, Shetland (Jumper).
- V No. 60 Petrie, Miss Janet, Aithness, Fetlar, Shetland (Jumper).
- C No. 47 Leask, Miss Margaret H., Taing, Cott, Weisdale, Shetland (Jumper).

#### CLASS 4. EXHIBITS OTHER THAN ABOVE.—

PREMIUMS, £2, £1, and 10s.

- 1st No. 74 Bookless, Mrs E., Moy, Co. Tyrone, North Ireland (Child's Suit).
- 2nd No. 85 Mouatt, Mrs P. S., Hooplees, North Roe, Lerwick (Shawl).
- 3rd No. 87 Smith, Mrs H. J., 93 Commercial Street, Lerwick (Dressing Jacket).
- V No. 79 Hosie, Miss Jean, Nurses Home, Melrose (Shawl).
- H No. 84 Mouatt, Mrs P. S., Hooplees, North Roe, Lerwick (Shawl).
- C No. 83 Mackay, Miss Grace P., Whiteness, Lerwick (Shawl).

## TWEEDS.

**CLASS 5. HARRIS or OTHER TWEED—Hand-woven.—**  
PREMIUMS, £3, £2, and £1.

1st No.	95	Hogg, David, 10 High Street, Earliston, Berwickshire
2nd No.	96	Hogg, David, 10 High Street, Earliston, Berwickshire
3rd No.	97	Johnson, James, Gateside, Levenwick, Lerwick
V No.	98	MacGregor, Robert, Paton Street, Inverness.
H No.	101	M'Leod, Mrs, Achillie, Rogart.
C No.	104	Ross, Mrs Donald S., Lairg.

**CLASS 6. TARTAN—Vegetable-dyed and Hand-woven.—**  
PREMIUMS, £3, £2, and £1.

1st No.	113	Ross, Mrs Donald S., Lairg
2nd No.	114	Ross, William, Lairg.
3rd No.	109	MacGregor, Robert, Paton Street, Inverness.
V No.	111	Murray, Miss Margaret, Tressady Hill, Lairg
H No.	108	Dickson, A. F., Benarty, Brora.

**CLASS 7. CARRIAGE RUG or PLAID—Hand-woven —**  
PREMIUMS, £3, £2, and £1.

1st No.	125	Murray, Miss Margaret, Tressady Hill, Lairg
2nd No.	115	Biermann, Mrs Louis, Blairich, Rogart.
3rd No.	127	Ross, William, Lairg
V No.	124	Murray, Miss Margaret, Tressady Hill, Lairg
H No.	126	Ross, Mrs Donald S., Lairg.
C No.	116	Dickson, A F, Benarty, Brora.

## MISCELLANEOUS.

**CLASS 8. HOOK-THROUGH FLOOR RUG (New Wool) —**  
PREMIUMS, £3, £2, and £1.

1st No.	148	Macmillan, Miss Mary G, Glencrosh, Moniaive, Dumfries-shire.
2nd No.	131	Burnett, Miss Jessie E. D., Rubersalea, Denholm, Hawick.
3rd No.	151	Newton, Miss Mary, Ruskin Mount, Millom, Cumberland
V No.	136	Fallow, Miss J. A, Mellerstain Schoolhouse, Gordon, Berwick-shire
H No.	144	M'Dougall, Andrew, Boreland, Lockerbie.
C No.	134	Dodds, Mrs J R, Buccleuch Street, Melrose.
C No.	150	Newton, Miss Mary, Ruskin Mount, Millom, Cumberland.

**CLASS 9. ANY OTHER VARIETY FLOOR RUG (New Wool).—**  
PREMIUMS, £3, £2, and £1.

1st No.	165	Macleod, Miss Annie, 5 Garenin, Carloway, Isle of Lewis.
2nd No.	157	Alison, Mrs, D'Arcy, Dalkerth.
3rd No.	164	MacKean, Mrs M., 53 Falcon Road, Edinburgh.
V No.	161	Gloag, Miss, Tullochard, Kingussie.
H No.	158	Burnett, Miss Jessie E. D., Rubersalea, Denholm, Hawick

**CLASS 10. SPECIMEN OF WHITE EMBROIDERY**—to be exhibited unwashed.—PREMIUMS, £3, £2, and £1.

- 1st No. 174 Pringle, Mrs E., Plane Tree House, Keenley, Allendale, Northumberland (Tea Cloth).  
 2nd No. 177 Wright, Miss Jane, 58 Over Haugh Street, Galashiels (Collar).  
 3rd No. 172 Marr, Miss Mary, Council Buildings, Cuminestown, Aberdeenshire (Tea Cloth).

**CLASS 11. SPECIMEN OF COLOURED EMBROIDERY**—Silk or Cotton. (Canvas work not eligible).—PREMIUMS, £3, £2, and £1.

- 1st No. 199 Irving, Mrs M., Market Square, Stony Stratford (Cushion Cover).  
 2nd No. 202 Leach, Mrs A., 18 Gayton Road, Harrow, Middlesex (Mat).  
 3rd No. 206 Pringle, Mrs E., Plane Tree House, Keenley, Allendale, Northumberland (Table Runner).  
 V No. 186 Coutts, Miss Catherine M., Woodside, Markinch, Fife (Table Top).  
 H No. 215 Stokes, Mrs George, Easter Gallovie, Dulnainbridge, Grantown-on-Spey (Picture).  
 C No. 189 Douglas, Miss I., Rigghill, Closeburn, Dumfriesshire (Supper Cloth).

**CLASS 12. SPECIMEN OF COLOURED EMBROIDERY**—Woolwork. (Canvas work not eligible).—PREMIUMS, £3, £2, and £1.

- 1st No. 221 Burns, Miss Mary, Woodend, Strutherhill, Larkhall, Lanarkshire (Stool Top).  
 2nd No. 228 Jamieson, Mrs M. B., Blakehope, Clovenfords, Galashiels (Bedspread).  
 3rd No. 235 Reid, Miss Grizillia, Enfield, Symington, Biggar (Panel).  
 H No. 239 Swinton, Mrs, Swinton House, Duns (Bedspread).  
 C No. 223 Cook, Miss Jean, Roadhead Cottage, Edgerston, Jedburgh (Stool Top).  
 C No. 238 Stratton, Miss Ella, 23 East Haddon Road, Dundee (Cushion).

**CLASS 13. SPECIMEN OF OLD ENGLISH QUILTING**.—PREMIUMS, £3, £2, and £1.

- 1st No. 248 Rutherford, Mrs H., Garretshields, Otterburn, Northumberland (Quilt).  
 2nd No. 240 Anderson, Mrs A., 9 Park Terrace, Hawick (Bedspread).  
 3rd No. 245 Jamieson, Miss Ella M., Borough Gates, Aberlady (Cushion).  
 V No. 247 Rintoul, Miss L. J., Balsanney, Upper Largo, Fife (Cushion).  
 C No. 249 Rutherford, Mrs H., Garretshields, Otterburn, Northumberland (Quilt).

**CLASS 14. PAIR OF LEATHER GLOVES**.—PREMIUMS, £2, £1, and 10s.

- 1st No. 257 Downing, Mrs H. H., Knotwood Farm, Stony Stratford.  
 2nd No. 263 Dunchurch and Thurlaston Women's Institute, Rugby.  
 3rd No. 254 Clouston, Mrs J. R., 168 Queensferry Road, Rosyth.  
 C No. 255 Clouston, Mrs J. R., 168 Queensferry Road, Rosyth.  
 C No. 259 Dunchurch and Thurlaston Women's Institute, Rugby.  
 C No. 260 Dunchurch and Thurlaston Women's Institute, Rugby.  
 C No. 258 Dunchurch and Thurlaston Women's Institute, Rugby.  
 C No. 261 Dunchurch and Thurlaston Women's Institute, Rugby.  
 C No. 264 Irving, Mrs M., Market Square, Stony Stratford.

**CLASS 15. SPECIMEN OF LEATHER WORK OTHER THAN GLOVES —PREMIUMS, £2, £1, and 10s**

- 1st No. 272 Clouston, Mrs J R, 168 Queensferry Road, Rosyth (Writing Case)  
 2nd No 273 Clouston, Mrs J R, 168 Queensferry Road, Rosyth (Handbag).  
 3rd No 276 Irving, Mrs M, Market Square, Stony Stratford (Letter Case)  
 V No 266 Belcher, Miss Nellie, Holmleigh, Claverdon, Warwick (Writing Case)  
 H No 267 Belcher, Miss Nellie, Holmleigh, Claverdon, Warwick (Handbag)  
 C No 270 Bryden, Mrs J, 190 Foulford Road, Cowdenbeath, Fife (Shopping Bag)  
 C No 269 Bryden, Mrs J, 190 Foulford Road, Cowdenbeath, Fife (Handbag)  
 C No 274 Downing, Mrs H H, Knotwood Farm, Stony Stratford (Handbag)

**CLASS 16. SPECIMEN OF HAND PAINTED POTTERY — PREMIUMS, £2, £1 and 10s**

- 1st No 278 Blair Mrs, See Worthy, North Berwick (Jug)  
 2nd No 285 Wight, Miss Betty, Glen House Studio, North Berwick (Bowl)  
 3rd No 280 Hogg, Miss J M, Garioch, Weirgate Road, St Boswells (Bowl)  
 V No 286 Wight, Miss Betty, Glen House Studio, North Berwick (Jug)  
 H No 281 Mackenzie, Mrs H, 3 Elcho Road, Longniddry (Pot-Pourri Jar)  
 C No 277 Blair, Mrs, See-Worthy North Berwick (Jug)  
 C No 284 Wight, Miss Betty, Glen House Studio, North Berwick (Vase)  
 C No 287 Wight, Miss Betty, Glen House Studio, North Berwick (Loving Cup)  
 C No 283 Reid, Miss Grizilla, Enfield, Symington, Biggar (Loving Cup)

**CLASS 17. SPECIMEN OF BASKET WORK (Raffia not eligible). —PREMIUMS, £2, £1, and 10s**

- 1st No 294 Rose, Frank, Kirkton of Balmerino, Wormit, Fife (Shopping Basket)  
 2nd No 293 Nixon, Miss Euphemia, Kirkton of Balmerino, Wormit, Fife (Shopping Basket)  
 3rd No 295 Tealing W R I, Tealing, Dundee (Baby's Basket)  
 C No 292 Mitchell, Miss Elizabeth, Coul Waterworks, Markinch, Fife (Linen Basket)  
 C No 291 Donaldson, Miss, The Beeches, Clovenfords, Galashiels (Shopping Basket)

**CLASS 18. HOME-SPUN YARN—2-3 cuts —PREMIUMS, £2, £1, and 10s**

- 1st No 305 Smith, Miss Dollina, Gunnister, Uyeasound, Lerwick  
 2nd No 304 Smith, Miss Dollina, Gunnister, Uyeasound, Lerwick  
 3rd No 299 Cluness, Mrs A T, Muness, Uyeasound, Lerwick  
 V No 306 Smith, Miss Jeannie, Gunnister, Uyeasound, Lerwick  
 H No 301 Hawick, Miss Annie E, Swinister, Ollaberry, Shetland.  
 C No 296 Abernethy, Mrs M, Bretvold, North Roe, Northmavine, Shetland  
 C No. 300 Dundas, Mrs D J, Woodhouselea, Milton Bridge, Midlothian.

**CLASS 19. SPECIMEN OF HAND-MADE LACE other than Crochet.—PREMIUMS, £3, £2, and £1.**

- 1st No. 309 Chalmers, Miss I., Boghead, Asleed, New Deer, Aberdeenshire (Point).  
 2nd No. 313 M'Callum, Miss Grace, Craiganiven, Strachur, Argyll (Filet).  
 3rd No. 308 Budge, Mrs A. C., Mount Ceres, Broomieknowe, Lasswade (Lacis).  
 V No. 311 Galletly, Miss Annie E., Newstead, Melrose (Honiton Point).  
 H No. 316 Ross, Miss Janet B., 16 Carlton Terrace, Glasgow (Filet Brodé).  
 C No. 310 Cluness, Mrs A. T., Muness, Uyeasound, Lerwick (Shetland).

**CLASS 20. MEN'S GOLF or KILT HOSE.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 322 Campbell, Mrs N., Poltalloch, Kilmartin, Argyll.  
 2nd No. 324 Crawford, Mrs H. C., Tayvallich, Lochgilphead.  
 3rd No. 346 Stuart, Mrs K. P., Angel Court, Fortrose, Ross-shire.  
 V No. 323 Carmichael, Miss E. M., Invershuna, Lochgilphead.  
 H No. 333 Gibson, Mrs F., Balfunning, Balfron, Stirlingshire.  
 C No. 320 Cameron, Miss Annie, The Home Farm, Kingairloch, Ardgour.  
 C No. 334 Gibson, Mrs F., Balfunning, Balfron, Stirlingshire.  
 C No. 335 Gibson, Mrs F., Balfunning, Balfron, Stirlingshire.

**CONFINED CLASSES.**

**Open to Women's Rural Institutes and Members thereof in the whole of Scotland.**

**CLASS 21. SPECIMEN OF PATCHWORK QUILTING.—PREMIUMS, £3, £2, and £1.**

- 1st No. 353 White Bridge W.R.I., Peebles (Bedspread).  
 2nd No. 348 Henderson, Mrs T., Sunnyknowe, Gattonside, Melrose (Bedspread).  
 3rd No. 350 Montgomery, Miss Jean B., Netherhall, Castle Douglas (Cot Cover).

**CLASS 22. ARTICLE SHOWING CROCHET LACE.—PREMIUMS, £2, £1, and 10s.**

- 1st No. 357 M'Dougall, Mrs A., Boreland, Lockerbie (Tea Cloth).  
 2nd No. 359 Rattray, Miss Janet, Muirdrum, Carnoustie (Tea Cosy).  
 3rd No. 356 Kinnear, Mrs Thomas, Toll Road, Cellardyke, Fife (Tray Cloth).  
 V No. 360 Robertson, Miss M. A., Post Office, Port William, Wigtownshire (Tray Cloth).  
 H No. 361 Rodger, Miss M. C., Muircleugh, Lauder (Tea Cloth).

**CLASS 23. ARTICLE DECORATED WITH GEOMETRICAL DESIGN IN SATIN STITCH AND PULLED STITCHES (worked on Linen in Linen Thread).—PREMIUMS, £3, £2, and £1.**

- 1st No. 366 Hay, Mrs J. M., Homebank, Chirnside, Berwickshire (Tea Cloth).  
 2nd No. 364 Elliot, Mrs, Edington Mains, Chirnside, Berwickshire (Tray Cloth).

**CLASS 24. SPECIMEN OF CANVAS WORK EMBROIDERY**  
(Raffia not eligible).—PREMIUMS, £2, £1, and 10s.

- 1st No. 374 Fleming, Mrs James, Woodhouse, Kirtlebridge, Dumfriesshire (Bag).  
 2nd No. 371 Coltart, Mrs A. B., 16 Albert Street, Dalbeattie (Fire Screen).  
 3rd No. 383 Vance, Miss Mary, Skeog, Whithorn, Wigtownshire (Picture).  
 V No. 372 Coulson, Mrs H. P., Abbeystone, Strone, Argyll (Cushion).  
 H No. 379 Nixon, Miss Euphemia, Kirkton of Balmerino, Wormit, Fife (Cushion Cover).

**CLASS 25. PAIR OF SOCKS, 4-ply, Plain Knitting.**—  
PREMIUMS, £2, £1, and 10s.

- 1st No. 386 Campbell, Mrs N., Poltalloch, Kilmartin, Argyll.  
 2nd No. 389 Duff, Mrs James, Tayness, Kilmartin, Argyll.  
 3rd No. 409 Macdonald, Mrs D. G., Kinloch, Collessie, Fife.  
 V No. 384 Anderson, Miss Mary C., Sea View, Abbey Burnfoot, Castle Douglas.  
 H No. 406 Lockie, Mrs C., Pulrossie Farm, Dornoch.  
 C No. 398 Gibson, Mrs A., Williamston Cottage, Madderty, Crieff.  
 C No. 403 Hislop, Miss, Darlingfield, Gordon, Berwickshire.

**CLASS 26. CHILD'S COTTON DRESS (Age 4-6) with Knickers.**—  
PREMIUMS, £2, £1, and 10s.

- 1st No. 435 Erskine, Miss G. M., Claymires Cottage, Newstead, Melrose.  
 2nd No. 433 Burns, Miss Elsie M., The Lake, Kirkcudbright.  
 3rd No. 442 Marr, Miss Mary, Council Buildings, Cuminestown, Aberdeenshire.  
 H No. 447 Seton, Miss Bessie A., 16 Crofthead Road, Prestwick, Ayr.  
 C No. 436 Erskine, Miss G. M., Claymires Cottage, Newstead, Melrose.

# BUTTERMAKING COMPETITIONS

## CHAMPIONSHIP CLASS

### *Gold Medal.*

No. 45 Reid, Miss Isabel, Lundie, Doune.

### *Silver Medal.*

No. 49 Crichton, Ronald, Fairview, 286 Wedderlea Drive, Cardonald, Glasgow.

## NOVICE CLASS—FIRST SECTION.

### PREMIUMS, £3, £2, and £1.

- 1st No. 8 Powell, C. E., Lionell, Rindleford, Millhouse, Bridgnorth, Shropshire.  
 2nd No. 5 Langlands, Miss Molly, 18 Brighton Place, Portobello.  
 3rd No. 3 Gray, Miss Margaret A., Dryhope, Yarrow.  
 V No. 10 Rose, A. W., Dairy School, Auchincruive, Ayr.  
 H No. 9 Rangasamy, M. C., c/o Imperial Dairy Institute, Wellington, India.  
 C No. 4 Jones, Miss Ena A., 82 Netherby Road, Trinity, Edinburgh.

## NOVICE CLASS—SECOND SECTION.

### PREMIUMS, £3, £2, and £1.

- 1st No. 20 Zimmerman, Miss Agnes, Blindwells, Guildtown, Perthshire.  
 2nd No. 14 Edmunds, Miss Nan E., Strathallan Castle Dairy, Auchterarder.  
 3rd No. 18 Thompson, Thomas H., High Cummersdale Farm, Carlisle.  
 V No. 11 Crawford, Miss Isabel, Muirhouse Farm, Linlithgow.  
 H No. 12 Duff, Miss Elizabeth M. W., Ardnahane, Crieff.  
 C No. 15 Fairbairn, Miss Mary R. B., Houndslow, Gordon.

## OPEN CLASS—FIRST SECTION.

### PREMIUMS, £5, £3, £2, and £1.

- 1st No. 22 Fairbairn, Miss Mary R. B., Houndslow, Gordon.  
 2nd No. 25 Murray, Miss Margaret E., Faugh Beeches, Heads Nook, Carlisle.  
 3rd No. 27 Powell, C. E. Lionel, Rindleford, Millhouse, Bridgnorth, Shropshire.  
 4th No. 24 Langlands, Miss Molly, 18 Brighton Place, Portobello.  
 V No. 29 Thompson, Thomas H., High Cummersdale Farm, Carlisle.  
 H No. 23 Gray, Miss Margaret A., Dryhope, Yarrow.  
 C No. 21 Duff, Miss Elizabeth M. W., Ardnahane, Crieff.  
 C No. 28 Rose, A. W., Dairy School, Auchincruive, Ayr.

## OPEN CLASS—SECOND SECTION.

### PREMIUMS, £5, £3, £2, and £1.

- 1st No. 33 Edmunds, Miss Nan E., Strathallan Castle Dairy, Auchterarder.  
 2nd No. 38 Rennie, Miss Catherine, Baads Mains, West Calder.  
 3rd No. 30 Clapham, John R., High Phrocton, West Hartlepool.  
 4th No. 34 Heap, Leslie H., Crag View, Calverley, Leeds.  
 V No. 31 Crawford, Miss Isabel, Muirhouse Farm, Linlithgow.  
 H No. 35 Martin-Smith, Miss Mary, Priestfield, Ladybank, Fife.



## OPEN CLASS—THIRD SECTION.

PREMIUMS, £5, £3, £2, and £1.

- 1st No. 40 Jones, Miss Ena A., 82 Netherby Road, Trinity, Edinburgh.  
 2nd No. 45 Reid, Miss Isabel, Lundie, Doune.  
 3rd No. 43 Murray, Miss Maria M., Faugh Beeches, Heads Nook, Carlisle.  
 4th No. 44 Pullar, Miss Hannah, Duchlage Farm, Crieff.  
 V No. 46 Wylie, Miss Alice W. G., Stockbridge, Dunblane.  
 C No. 41 Kerr, Miss Rachael, Wilcoxholm Farm, Linlithgow.  
 C No. 47 Zimmerman, Miss Agnes, Blindwells, Guildtown, Perthshire.

## OPEN CLASS—FOURTH SECTION.

PREMIUMS, £5, £3, £2, and £1.

- 1st No. 49 Crichton, Ronald, Fairview, 286 Wedderlea Drive, Cardonald, Glasgow.  
 2nd No. 52 Edwards, Miss Margaret A., Humber Court, Leomister, Shropshire.  
 3rd No. 48 Cartner, Miss Betty, Metal Bridge, Blackford, Carlisle.  
 4th No. 51 Drake, Miss Margaret M., Middlerigg, Bathgate.  
 V No. 53 M'Kenzie, Miss Betty, Poltalloch Home Farm Dairy, Kilmichael Glassary, Argyll.  
 H No. 39 Duncan, Miss Millicent I., Mains of Pittendreich, Bridge of Marnoch, Huntly.  
 C No. 54 M'Vicar, Miss Margaret A., Knockalva, Kilmichael Glassary, Argyll.  
 C No. 57 Stratton, Miss Mary A., Littleport Farm, St Fillans.

## NOVICE CLASS—THIRD SECTION.

PREMIUMS, £3, £2, and £1.

- 1st No. 63 Morrison, Miss Jessie, Easter Urray, Muir of Ord.  
 2nd No. 62 Mitchell, Miss Agnes G. C., Easter Lathrisk, Ladybank, Fife.  
 3rd No. 58 Arbuckle, Miss Margaret, Lower Luthrie, Cupar, Fife.  
 V No. 66 Sword, Miss Helen B., 51 High Street, Selkirk.  
 H No. 2 Diggory, Miss B. E., Old Hall, Stoke Prior, Leominster, Shropshire.  
 C No. 65 Pullar, Miss Violet, Duchlage Farm, Crieff.

## NOVICE CLASS—FOURTH SECTION.

PREMIUMS, £3, £2, and £1.

- 1st No. 67 Telfer, Miss Annie R., Newbiggin, Cambo, Morpeth.  
 2nd No. 74 Logie, Miss Janetta, Lochend, Dykeside, Westray, Orkney.  
 3rd No. 70 Dunkeld, Miss Margaret H., Glenae, Brown Street, Motherwell.  
 V No. 75 Martin-Smith, Miss Mary, Priestfield, Ladybank, Fife.  
 H No. 69 Bruce, Miss Helen B., Ferrymuir Farm, Cupar, Fife.  
 C No. 77 Roberts, Miss Helen I., Conon Bridge, Ross-shire.

## SHOE-MAKING COMPETITION

Open to Shoeing-Smiths from any part of Great Britain,  
Northern Ireland, and Irish Free State.

1st Prize, £5 ; 2nd Prize, £4 ; 3rd Prize, £3 ; 4th Prize, £2.  
5th Prize, £1.

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| 1st No. 10 | Nicol, William, Millbank, Cluny, Tillyfourie, Aberdeenshire. |
| 2nd No. 11 | M'Donald, Ian, Castlehill Smithy, Kintore, Aberdeenshire.    |
| 3rd No. 16 | Ferrie, Thomas C., Ruchazie, Millerston, Glasgow.            |
| 4th No. 8  | Duffy, John, Milton Smithy, Glenluce, Wigtownshire.          |
| 5th No. 15 | Fenton, R., Old Montrose Smithy, Montrose.                   |
| V No. 18   | Nicol, Alexander, Muir of Alford, Aberdeenshire.             |
| H No. 2    | Currie, James, New Christiclands, Annan.                     |
| C No. 24   | Barrie, James H. H., 18 Greenside Lane, Lanark.              |

## HORSE-SHOEING COMPETITION

Open to Shoeing-Smiths from any part of Great Britain,  
Northern Ireland, and Irish Free State.

Silver Tea Service, given by the Scottish Iron & Steel Co., Ltd., Glasgow,  
*to the winner of First Prize in Class 1.*

Gold Medal, given by National Master Farriers' and Blacksmiths' Association,  
*to be awarded to the competitor obtaining the highest number of points in Class 1.*

Canteen of Cutlery, given by Messrs Neilson & Cleland, Ltd., Coatbridge,  
*to the winner of Second Prize in Class 1.*

Gold Medal, given by the Mustad Horse Nail Company, *to the winner of Third Prize in Class 1.*

Gold Medal, given by Capewell Horse Nail Company, *to the winner of Fourth Prize in Class 1.*

**CLASS 1. FARM HORSES (OPEN CLASS).** 1st Prize, £5, Silver Tea Service, and Gold Medal ; 2nd Prize, £5 and Canteen of Cutlery ; 3rd Prize, £5 and Gold Medal ; 4th Prize, £4 and Gold Medal ; 5th Prize, £3 ; 6th Prize, £2 ; 7th Prize, £2 ; 8th Prize, £1 ; 9th Prize, £1.

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| 1st No. 25 | Young, Matthew L., Pollokton, Newton Mearns, Renfrewshire.   |
| 2nd No. 3  | Nicol, William, Millbank, Cluny, Tillyfourie, Aberdeenshire. |
| 3rd No. 15 | M'Donald, Ian, Castlehill Smithy, Kintore, Aberdeenshire.    |

- 4th No. 20 Cairns, Robert, Ladykirk, Norham-on-Tweed.  
 5th No. 6 Fenton, R., Old Montrose Smithy, Montrose.  
 6th No. 11 Blackie, John, Ryslaw Smithy, Duns.  
 7th No. 17 Duffy, John, Milton Smithy, Glenluce, Wigtownshire.  
 8th No. 29 Story, Peter, Stichill, Kelso.  
 9th No. 1 Nicol, Alexander, Muir of Alford, Aberdeenshire.  
 V No. 31 Davidson, Alexander, 24 High Street, Buckie.  
 H No. 30 Redford, Alexander G., Sen., Cargill Smithy, Meikleour.  
 C No. 2 Ferrie, Thomas C., Ruchazie, Millerston, Glasgow.  
 C No. 4 Lyon, George R., 9 Commercial Road, Oldmeldrum, Aberdeen.  
 C No. 32 Redpath, Robert, Galaside, Galashiels.  
 C No. 34 M'Rae, John, Jun., Knowenack, Kirkmuirhill, Lanark.

Gold Watch, given by Messrs William Martin, Sons, & Co., Coatbridge, *to the winner of First Prize in Class 2.*

Canteen of Cutlery, given by Messrs Neilson & Cleland, Ltd., Coatbridge, *to the winner of Second Prize in Class 2.*

Gold Medal, given by the Mustad Horse Nail Company, *to the winner of Third Prize in Class 2.*

**CLASS 2. FARM HORSES** (for Competitors under twenty-five years of age)—1st Prize, £5 and Gold Watch; 2nd Prize, £3 and Canteen of Cutlery; 3rd Prize, £2 and Gold Medal; 4th Prize, £1.

- 1st No. 42 Fenwick, David P., Balmuir Smithy, Mains, Dundee.  
 2nd No. 37 Nicol, Frank J., The Smithy, Torphins, Aberdeenshire.  
 3rd No. 38 Massie, James, Castlehill Smithy, Kintore, Aberdeenshire.  
 4th No. 36 Redford, Alexander, Jun., Balbeggie Smithy, Balbeggie, Perthshire.  
 V No. 39 Wood, Alexander J., Glenbarry Smithy, Knock, Huntly.  
 H No. 33 Little, George R., Hassington, Greenlaw, Berwickshire.  
 C No. 43 Millar, Robert, Kilmany Smithy, Cupar, Fife.

## LIVE STOCK JUDGING COMPETITION

Open to all persons not exceeding 21 years of age at  
the date of the Competition.

' Glasgow Herald ' Challenge Cup, value £50, awarded each year to the team winning the First Prize in the Team Competition. Given by Messrs George Outram & Co., Ltd., Glasgow.

West Perthshire Young Farmers' Club (Team B), 236 points.

Gold Medal to the highest individual scorer. Given by Messrs George Outram & Co., Ltd., Glasgow.

Logan, John, Powis Mains, Stirling . . . . . 62 points

### INDIVIDUAL COMPETITION.

PRIZES, £5, £4, £3, £2, and £1.

1st	Logan, John, Powis Mains, Stirling . . . . .	62 points
2nd	Macdonald, Alastair, 8 Dundas Street, Edinburgh . . . . .	56 "
3rd	} equal {	Howie, John, Balhelvie, Newburgh, Fife . . . . . 54 "
4th		Letham, R. James, Hopefield Farm, Bonnyrigg . . . . . 54 "
5th		Matthewson, Adam, Soutra Mains, Blackshiels . . . . . 54 "
		Lang, William, Starr Farm, Cupar, Fife . . . . . 54 "

### TEAM COMPETITION.

PRIZES { 1st, £10 and 5 Medium Silver Medals.  
          { 2nd, £5 and 5 Medium Bronze Medals.

1st	West Perthshire Young Farmers' Club (Team B) . . . . .	236 points
2nd	West Perthshire Young Farmers' Club (Team A) . . . . .	228 "

Special Prize for College team placed highest in Competition—£5.

Edinburgh and East of Scotland College of Agriculture, 214 points.

## NEW IMPLEMENTS

The Judges, having inspected the new implements submitted for competition, awarded a Silver Medal to—

The "Elderslie" Aquatic Weed Cutter (No. 424); invented by A. A. Hagart Speirs of Elderslie, Houston House, Renfrewshire. Exhibited by P. & R. Fleming & Co., 29 Argyle Street, Glasgow.

## FLOWER SHOW

The following were awarded Gold Medals :—

- No. 2    Dicksons & Co., 20 Charlotte Square, Edinburgh. (Roses and other Flowers.)
- Nos. 10 and 11    Storrie, Thyne & Co., Ltd., Downfield Nurseries, Dundee. (Lupins and other Herbaceous Flowers. Fruit Trees in pots.)
- No. 17    Oliver & Hunter, Moniaive, Dumfriesshire. (Alpine and Herbaceous Flowers.)
- No. 20    Allwood Bros., Wivelsfield Nurseries, Haywards Heath, Sussex. (Display of Carnations and Pinks.)
- No. 21    Dobbie & Co., Ltd., Seedsmen and Nurserymen, Edinburgh. (Dahlias, Sweet Peas, and Roses.)
- No. 23    Austin & M'Aslan, Ltd., 91-95 Mitchell Street, Glasgow, C.I. (Rock and Water Garden, constructed of weathered Westmorland Limestone, with choice Shrubs and Alpine Plants.)

The following were awarded Silver Medals :—

- No. 5    James Laurie & Son, Landscape Architects, Blackness Nursery, Ninewells, Dundee. (Rock Shrubs and Alpine Plants.)
- No. 9    Thomas Methven & Sons, 113 George Street, Edinburgh. (Display of Floral Designs and Cut Flowers.)
- No. 12    T. Smith, Daisy Hill Nursery, Newry, Northern Ireland. (Collection of Hardy Plants and Shrubs, with choice Alpine and Rock Plants.)
- No. 13    Laird & Dickson, Pinkhill Nurseries, Edinburgh. (Choice Plants for the Rock Garden.)
- No. 14    Bakers, Codsall, Wolverhampton. (Lupins and Delphiniums.)
- No. 18    John Forbes (Hawick), Ltd., Buccleuch Nurseries, Hawick. (Phloxes, Pentstemons, Delphiniums, and other Herbaceous Flowers.)

The following were Commended :—

- No. 1    Little & Ballantyne, Ltd., Nurserymen and Seedsmen, Carlisle. (Greenhouse and Stove Plants. Roses and other Flowering Plants.)
- No. 3    William Cranston, Netherraw, Melrose. (Strawberries—Cranston's Improved Paxton, a cross between the Wild Strawberry (*Fragaria Vesca*) and the Sir Joseph Paxton variety.)

- No. 4 Castlehill Nurseries (The Misses Clark), Kippen, Stirlingshire. (Alpine Plants.)
- No. 6 Maxwell & Beale, Ltd., Broadstone, Dorset. (Table Rock Garden planted with Hardy Heaths, Alpines, Primulas, and Dwarf Shrubs.)
- No. 7 Andrew Hannah, London Road Nurseries, Kilmarnock. (Shrubs, Evergreen and Deciduous.)
- No. 8 Peter Aitken, Ballencrieff Nursery, Bathgate. (Alpine and Rock Plants.)
- No. 15 Edrom Nurseries, Coldingham, Berwickshire. (Rock Garden Plants.)
- No. 16 Mrs J. Laing, Viewfield, Hawick. (Alpine and Rockery Plants.)
- No. 19 Wheatcroft Bros., Ltd., Ruddington, Nottingham. (Roses.)
- No. 22 The Misses Mern Cunningham and Kate Hawkins, Garden Architects, 20 Charlotte Square, Edinburgh. (Rock Garden. (Plants from Edrom Nurseries.))

## JUDGES.

*Shorthorn*—Robert L. P. Duncan, Pitpointie, Auchterhouse; Alexander Ritchie, The Royal Farms, Windsor.

*Dairy Shorthorn*—William Briggs, Heaverham, Kemsing, Kent.

*Aberdeen-Angus*—C. F. Tulloch, Braevall, Lethen, Nairn; Samuel E. Williams, Coolcower, Macroom, Co. Cork.

*Galloway*—William M. M'Conchie, Mains of Penninghame, Newton Stewart.

*Belted Galloway*—William Hyslop, Knockycoid, Barrhill.

*Highland Cattle*—Alexander C. M'Intyre, Staclosha, Bonahaven, Islay.

*Ayrshire*—John Johnstone, Millantae, Lookerbie.

*British Friesian*—John M'Kendrick, Craigends, Dennistoun, Kilmacollm; J. L. Nisbet, Easter Newton, Kirknewton.

*Dairy Cows*—John Johnstone, Millantae, Lookerbie; John M'Kendrick, Craigends, Dennistoun, Kilmacollm.

*Clydesdale Stallions and Colts*—George A. Marshall, Mansefield, Kirkcudbright; Andrew Renwick, Grindon, Norham-on-Tweed.

*Clydesdale Geldings*—John M'K. M'Farlane, Baillielands, Auchterarder.

*Clydesdale Mares and Fillies*—G. M. Beck, The Lane, Ravenstonedale; John Stirling, Parkhead, Alloa.

*Hunters in Hand*—Major H. C. Meredith, Broadwood Hall, Clungunford, Salop.

*Hunters in Saddle*—E. G. E. Griffith, Plasnewydd, Trefnant, Denbigh.

*Highland and Western Island Ponies*—Major William Logan, O.B.E., Doonbank, Inverness.

*Shetland Ponies*—Walter A. Aitkenhead, Haining Valley, Linlithgow.

*Riding Ponies*—E. G. E. Griffith, Plasnewydd, Trefnant, Denbigh.

*Blackface*—J. W. Alexander, Golfhill, Moffat; James Macdonald, Ullar, Aberfeldy.

*Cheviot*—J. Jasper Dodd, Riccarton, Newcastleton; Walter Mundell, Gruids, Laig.

*Border Leicester*—Harry Findlay, Myreton, Dundee; John Young, Skerrington Mains, Hurlford.

*Half-Bred*—William I. Elliot, Middleton, Stow.

*Oxford Down*—Alexander Wyllie, Castlemaids, Gifford.

*Suffolk*—Captain R. S. Hall, New Hall, Tendring, Essex.

*Wensleydale Longwool*—R. H. Milner, Borwick Lodge, Carnforth.

*Fat Sheep*—William I. Elliot, Middleton, Stow.

*Goats*—Mrs G. M. Soames, Long Buckby Wharf, Rugby.

*Large White*—George A. Bruce, Inshfield, Insh.

*Large Black*—Hubert Groom, Northgate Hall, Warham, Wells, Norfolk.

*Poultry*—David Reid, Firthview, Portgordon—Classes 1 to 22, 41 to 63; Michael Harrison, "Milverton," Park Road, Haslington—Classes 23 to 26, 64 to 83, 88 to 102; John Wharton, Honeycott Farm, Hawes, Yorks—Classes 27 to 40, 84 to 87, 103 to 123.

*Dairy Produce*—Alexander Garvie, 64 Albion Street, Glasgow.

*Eggs*—Miss A. Kinross, West of Scotland Agricultural College, Auchincruive, Ayr.

*Honey, &c.*—J. Struthers, Templehill, Newmilns.

*Rural Industries*—Miss Bruce, 111A George Street, Edinburgh—Classes 1, 2, 3, 4, 5, 6, 7, 8, 9, 18, 19, 20, 25; Miss M. E. Paull, Dalvenie, Banchorry—Classes 10, 11, 12, 13, 21, 22, 23, 24, 26; Donald Gair, Moray House Training College, Edinburgh—Classes 14, 15, 16, 17.

*Buttermaking Competitions*—Miss J. Stubbs, Lancashire Agricultural Institute, Hutton, Preston, Lancs.—Open Sections; Miss G. Lewis, Old Academy Buildings, Rose Terrace, Perth—Novice Sections; W. M. Lennox, c/o A. M'Lelland & Sons, Ltd., Kilmarnock—Championship.

*Horse-shoeing and Shoe-making*—Robert H. Connachie, M.R.C.V.S., St Boswells; Robert Hamilton, Jun., Mutehill Smithy, Twynholm; Ralph A. Stephen, 19 Victoria Street, Montrose.

*Flower Show*—John T. Jeffrey, 19 Morningside Park, Edinburgh; John Melrose, Tweed Vineyard, Clovenfords, by Galashiels.

*Scottish Bacon Pig Competition*—J. H. Birch (Roberts & Birch (Burton), Ltd.), Mosley Street, Burton-on-Trent—Stage 1; Joseph Kirkpatrick and Edgar Kirkpatrick, Bacon Factory, Thornhill, Dumfriesshire—Stages 2 and 3.

## STEWARDS.

*Cattle*.—James Durno, Crichtie, Inverurie.

*Horses*.—George Grant of Glenfarclas, Blacksboat.

*Sheep, Goats and Pigs*.—James M'Laren, Cornton, Bridge of Allan.

*Poultry and Rabbits*.—James R. Lumsden of Arden, Dumbartonshire.

*Forage*.—John W. Prentice, Craigrie Farm, Clackmannan.

*Implements*.—J. P. Ross-Taylor, Mungoswalls, Duns.

*Flower Show*.—A. A. Hagart Speirs of Elderslie, Houston House, Renfrewshire.

*Special Events*.—Alexander Murdoch, East Hallside, Cambuslang.

*Grand Stands*.—Major Robert W. Sharpe of The Park, Earlstoun.

*Gates*.—Ian M. Campbell, Bal Blair, Invershin.

*Catering, Bees, Honey, &c.*—John E. B. Cowper, Gogar House, Corstonphine, Edinburgh.

## ASSISTANT STEWARDS.

*Cattle*.—Alexander Munro of Leanach, Culloden Moor, Inverness.

*Horses*.—John P. Sleight of St John's Wells, Fyvie.

*Sheep, Goats and Pigs*.—John Hewatson, Baltersan, Newton Stewart.

*Forage*.—T. Mercer Sharp, Bardrill, Blackford.

*Implements*.—James Paton, Kirkness, Glencraig.

*Grand Stands*.—Hon. Walter T. H. Scott, Master of Polwarth, Harden, Hawick.

*Gates*.—Andrew D. Elliot of Kettleshiel, Greenlaw.



## ATTENDING MEMBERS.

**SHORTHORN.**—*J. P. Ross - Taylor, James W. Jackson, James R. Johnston.*

**DAIRY SHORTHORN.**—*G. Bertram Shields, William Stewart.*

**ABERDEEN - ANGUS.**—*James Paton, Hugh H. Fleming, Robert Forrest, Andrew Pate.*

**GALLOWAY.**—*John Hewatson, Major R. F. Bredner, George B. Cockburn, William M'Kill.*

**BELTED GALLOWAY.**—*George Buchanan, Thomas Clark, Samuel Barr, John Inglis.*

**HIGHLAND CATTLE.**—*J. E. Kerr, James Dagg, James D. Dundas.*

**AYRESHIRE.**—*Thomas Templeton, W. F. Gilmour, R. Scott Aiton, Thomas S. Brown, William Hutcheson.*

**BRITISH FRIESIAN.**—*Captain Thomas Elliot, James B. Stewart, Henry N. Logan, W. H. Thomson.*

**DAIRY COWS.**—*G. Bertram Shields, William Stewart.*

**CLYDESDALE STALLIONS AND COLTS.**—*Alexander Forbes, Charles W. Ralston, R. H. Allan, Robert B. Bell, James Crawford.*

**CLYDESDALE GELDINGS.**—*Alexander Murdoch, George Buchanan, William H. Elliot, William Hogg, Jun.*

**CLYDESDALE MARES AND FILLIES.**—*James Wyllie, Thomas Elliot, James W. P. Amos, John L. Arnott, John Fleming.*

**HUNTERS IN HAND.**—*Colonel F. J. Carruthers, Major Robert W. Sharpe, J. Hastie Brydon, George Brunton, Thomas Douglas, Hugh C. Falconer, R. K. Tweddle.*

**HUNTERS IN SADDLE.**—*Colonel F. J. Carruthers, Major Robert W. Sharpe, J. Hastie Brydon, George Brunton, Thomas Douglas, Hugh C. Falconer, R. K. Tweddle.*

**HIGHLAND AND WESTERN ISLAND PONIES.**—*J. E. Kerr, Lord Rowallan, William Dodds, John Steele.*

**SUETLAND PONIES.**—*James Kilpatrick, James L. Hogarth, Kenneth T. McLellan.*

**RIDING PONIES.**—*The Earl of Home, K.T., Major Robert W. Sharpe, George Brunton, Thomas Douglas, Walter S. Douglas, Hugh C. Falconer, R. K. Tweddle.*

**BLACKFACE.**—*The Master of Polwarth, John S. Dickson, Thomas R. Elliot, John MacGilvray, William Mitchell.*

**CHEVIOT.**—*Phipps O. Turnbull, R. A. Robertson, Robert Beattie, A. D. Scarth, Thomas Scott, George H. Mills.*

**BORDER LEICESTER.**—*Major S. Strang Steel, T. W. Robson Scott, John R. Adamson, J. J. Elliot Smith.*

**HALF-BRED.**—*William Meiklem, Norman H. A. Laing, J. Elliot Scott, James P. Smith.*

**OXFORD DOWN.**—*T. Mercer Sharp, William B. Prentice.*

**SUFFOLK.**—*James Mitchell, James M. Herbertson, James Stewart.*

**WENSLEYDALE LONGWOOL.**—*Provost F. R. N. Curle, Robert E. Grieve.*

**FAT SHEEP.**—*Colonel Robert W. Walker, Bailie Thomas Lawrie.*

**GOATS.**—*Dr T. G. Nasmyth, Councillor J. S. Cunningham.*

**LARGE WHITE.**—*William Fraser, A. G. Shirra Gibb, James S. Robertson.*

**LARGE BLACK.**—*Gavin Ralston, Thomas B. Lyal.*

**POULTRY.**—*Dr J. F. Tocher, Bailie John Aitchison, Alexander Brownlie, J. Lewis Fringle.*

**DAIRY PRODUCE.**—*Dr A. E. Cameron, Councillor Stewart Crombie, William Pate.*

**EGGS.**—*Dr A. E. Cameron, Councillor Stewart Crombie, William Pate.*

**HONEY, &c.**—*A. Aikman Blair.*

**RURAL INDUSTRIES.**—*N. Ramsay Macpherson, Henry W. Scarth.*

**BUTTERMAKING COMPETITIONS.**—*T. G. Wilson, Mrs More.*

**HORSE-SHOING AND SHOE-MAKING.**—*John E. B. Cowper, George Buchanan, James B. Stewart, Andrew Aitken, William Mills, William Redpath.*

**FLOWER SHOW.**—*J. E. S. Nisbet.*

**SCOTTISH BACON PIG COMPETITION.**—*Captain Thomas Elliot, John E. B. Cowper, James Wither.*

## VETERINARY DEPARTMENT.

## CLASS EXAMINATIONS, 1936.

Silver Medals were awarded to the following :—

## GLASGOW VETERINARY COLLEGE.

Chemistry . . .	Edward C. Straiton, Clydebank
Biology . . .	Edward C. Straiton, Clydebank.
Senior Anatomy .	Charles M'Nulty, Wishaw.
Junior Anatomy .	James L. Shaw, Troon.
Physiology . . .	Miss O. D. James, Cardiff.
Zootechny . . .	Robert R. Macrae, Maybole.
Pathology . . .	Donald J. Macaulay, Lochmaddy.
Hygiene . . .	William A. Whitford, Paisley.
Surgery . . .	James Geddes, Glasgow.
Medicine . . .	Hugh B. Turkington, Paisley.
Histology . . .	Adam V. Farrell, Dumfries.
Pharmacology . .	Charles M'Nulty, Wishaw.
Parasitology . .	Donald J. Macaulay, Lochmaddy.

13 Large Silver Medals, £12, 0s. 6d.

## ROYAL (DICK) VETERINARY COLLEGE.

Chemistry . . .	J. Millar, Newton Stewart.
Biology . . .	J. M'Q. Brown, Fauldhouse.
Senior Anatomy .	H. B. Parry, Calne.
Junior Anatomy .	J. H. Wilkins, Naghdad.
Physiology . . .	W. S. Biggar, Dalbeattie.
Zootechny . . .	K. G. Comrie, Eastrigga.
Pathology . . .	J. W. Whittick, Edinburgh.
Hygiene . . .	A. T. Cowie, Piteaple.
Surgery . . .	J. G. K. Henderson, Belfast.
Medicine . . .	J. Finlayson, Portree.
Histology . . .	J. Keppie, Edinburgh.
Pharmacology . .	D. Luke, Larne.
Parasitology . .	J. W. Whittick, Edinburgh.

13 Large Silver Medals, £12, 0s. 6d.

## DISTRICT COMPETITIONS, 1936.

27 Districts—22 Grants of £12 each ; 2 of £11, 10s. ; 1 of £11, 8s. ;			
	1 of £11, 5s. ; and 1 of £10, 10s. . . . .	£320	3 0
15	„ Grants of £15 each . . . . .	225	0 0
	Special Grants : Medals, £18, 2s. 6d. . . . .	234	2 6
	Medals for Shows (65 large) . . . . .	60	2 6
	Premiums and Medals for Cottages, Gardens, &c. . . . .	10	18 0
31	„ Medals for Hoeing Competitions, 1935-36. . . . .	12	0 3
137	„ Medals for Ploughing, 1935-36 . . . . .	68	10 0
Long Service Certificates, £29, 6s. 7d. ; Gold Medals, £64, 16s. 9d. ;			
and Silver Medals, £26, 15s. 6d. (1935-36) . . . . .		120	18 10
		£1051	15 1

## ABSTRACT OF PREMIUMS.

District Competitions. . . . .	£930	16 3
Long Service Awards. . . . .	120	18 10
Veterinary Colleges (26 Medals) . . . . .	24	1 0
	£1075	16 1

## ABERDEEN SHOW, 1935.

### ALTERATIONS IN PRIZE LIST.

On account of animals failing to comply with the Regulations as to calving and foaling, the following changes have taken place in the list of animals for which prizes were awarded:—

#### CATTLE.

##### SHORTHORN.

CLASS 8. COW or HEIFER, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- \* No. 48 Gordon, Trustees of the late A. P., Bindal, Portmahomack, Heifer, "Balmuchy Lavender 6th" (158,059).
- 1st No. 53 Stewart, Duncan M., Millhills, Crieff, Cow, "Uppermill Paula" (157,426).
- 2nd No. 49 Linzee-Gordon, Charles A., of Cluny, Cluny Castle, Sauchen, Heifer, "Cluny Lady Augusta 11th" (158,076).
- \* No. 52 Snadden, W. M'Nair, of The Coldoch, Blair Drummond, Heifer, "Coldoch Rosewood 3rd" (162,725).
- 3rd No. 50 Murray, James, Balmerino, Wormit, Fife, Heifer, "Nancy Marigold" (160,433).

##### ABERDEEN-ANGUS.

CLASS 17. COW or HEIFER, born on or after 1st December 1932 and before 1st December 1933.—PREMIUMS, £10, £5, £3, and £2.

- \* No. 145 Macbeth, W. Gilchrist, of Dunira, Comrie, Heifer, "Black Beronia 2nd of Dunira" (103,182).
- 1st No. 137 Atkinson, Captain F. B., Gallowhill, Morpeth, Northumberland, Heifer, "Eva of Gallowhill 3rd" (101,752).
- 2nd No. 142 Kennody, Colonel Norman, D.S.O., of Doonholm, Ayr, Heifer, "Bryntirion of Doonholm" (103,049).
- \* No. 144 Kerr, J. E., of Harviestoun, Dollar, Heifer, "Julma Erica" (103,069).
- 3rd No. 139 Boddie, James, Banks, Strichen, Heifer, "Evola of Banks" (101,799).
- 4th No. 138 Beddie, James, Banks, Strichen, Heifer, "Gammer Gratis" (101,810).
- V No. 143 Kennedy, Colonel Norman, D.S.O., of Doonholm, Ayr, Heifer, "Bunty of Doonholm" (103,050).
- H No. 146 Sandeman, F. D. Stewart, The Laws, Kingennie, Angus, Heifer, "Baroness of The Laws" (104,014).
- C No. 141 Grant, A. D., Mains of Dalvey, Advie, Heifer, "Jean of Tulloch-gribban" (103,919).

*The animals failing to qualify are marked thus (\*).*

## BELTED GALLOWAY.

CLASS 28. COW or HEIFER, born before 1st December 1932, in Milk or in Calf; if in calf and not in milk, to calve on or before 1st December of the year of the Show.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 240 Sproat, J. Faed, Boreland of Anwoth, Gatehouse, Galloway, Cow, "Mochrum Cissie of Craigeach" (3014 B).  
 \* No. 237 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Doreen II." (2056 B).  
 2nd No. 236 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Margaret I." (1850 B).  
 3rd No. 238 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Norah I." (2066 B).  
 4th No. 239 Nalc Co., Ltd. (per Sir August Cayzer, Bart.), Estates Office, Gartmore, Stirling, Cow, "Gartmore Dandy IV." (3054 B).  
 V No. 235 Hamilton, General Sir Ian, G.C.B., 1 Hyde Park Gardens, London, Cow, "Lullenden Estelle II." (2118 B).  
 H No. 234 Brown, J. Douglas, Corseyard, Borgue, Kirkeudbright, Cow, "Knockbrex Fleur de Lys" (1596 B) (D).

## HIGHLAND.

CLASS 35. HEIFER, born on or after 1st December 1931 and before 1st December 1932.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 273 Southesk, The Earl of, Kinnaird Castle, Brechin, "Lady Mairi II." (10,722).  
 \* No. 275 Walker, Francis W., of Leys, Leys Castle, Inverness, "Giorsal of Leys" (10,605).  
 2nd No. 274 Southesk, The Earl of, Kinnaird Castle, Brechin, "Corrina III. of Southesk" (10,723).  
 3rd No. 271 Lees-Milne, Mrs. of Killundine, Drimnin, Oban, "Bean Bhan II. of Killundine" (10,598).  
 \* No. 272 Maitland, Brig.-General J. D. Heriot, C.M.G., D.S.O., of Errol, Errol Park, Errol, "Lydia Queen II. of Errol" (10,613).

## AYRSHIRE.

CLASS 42. HEIFER, born in 1933.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 347 Logan, W. & J., Burton Farm, Ayr, "Burton Bloomer" (52,340).  
 \* No. 346 Logan, W. & J., Burton Farm, Ayr, "Burton May" (52,348).  
 2nd No. 350 Sloan, Mungo, Hunter House, Lochmaben, "Hunter House Moss Rose 3rd" (49,836).  
 3rd No. 344 Buchanan, Andrew, Burnside of Balhaldie, Braco, Perthshire, "Balhaldie Bloom."  
 \* No. 348 Montgomerie, A. W., Westburn Farm, Cambuslang, Glasgow, "Westburn Miss Marjory."  
 4th No. 345 Dalziel, Robert, Rue, Auldgirth, Dumfriesshire, "Rue Marigold" (51,739).

*The animals failing to qualify are marked thus (\*).*

[ABSTRACT OF ACCOUNTS

# STATE OF THE FUNDS

OF

## THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

As at 30th NOVEMBER 1936

<b>I. BRITISH GOVERNMENT SECURITIES—</b>		
£25,000 3½ per cent War Loan, at 106½	£26,562 10 0	
£1,679, 13s. 4d. 2½ per cent Consolidated Stock, at 85	1,427 14 4	
£17,900 3½ per cent Conversion Loan, at 107½	19,197 15 0	
£2,500 3 per cent Do. do. at 104.	2,600 0 0	
£2,500 3 per cent Funding Loan, at 102	2,550 0 0	
	<hr/>	
	£52,337 19 4	
<b>II. HERITABLE BONDS—</b>		
£12,500 at Commissioners' Rates	12,500 0 0	
<b>III. RAILWAY DEBENTURE AND PREFERENCE STOCKS</b>		
£17,050 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£14,322 0 0	
£11,554 Do. do. 4 per cent do., at 107½	12,420 10 8	
£18,105 London Midland and Scottish Railway Co. 4 per cent Debenture Stock, at 108	17,393 8 0	
£1,500 Do. do. 4 per cent Preference Stock, at 92	1,380 0 0	
£708 Southern Railway Co. 4 per cent Debenture Stock, at 112	787 7 3	
£450 Do. do. 5 per cent Preference Stock, at 125½	564 15 0	
£112 Do. do. 5 per cent Guaranteed Stock, at 134	150 1 8	
	<hr/>	
	47,018 2 7	
<b>IV. BANK STOCKS—</b>		
£5,365 0 0 Royal Bank of Scotland Stock, at 492½ x.d.	£26,422 12 6	
£2,218 16 5 Bank of England Stock, at 377½	8,376 0 11	
£1,110 18 4 Bank of Scotland Stock, at 504	5,597 15 2	
2,850 "B" Shares, Barclays Bank, Ltd., at 79s. 9d.	11,364 7 6	
	<hr/>	
	51,760 16 1	
<b>V. COLONIAL GOVERNMENT STOCKS—</b>		
£2,500 Dominion of Canada Registered 3½ per cent Stock (1930-50), at 108	£2,575 0 0	
£2,000 Western Australia Inscribed 4 per cent Stock (1942-62), at 104	2,080 0 0	
£2,000 New Zealand Government 5 per cent Inscribed Stock (1946), at 112½	2,250 0 0	
£1,120 Victorian Government 3½ per cent Inscribed Stock (1929-49), at 101	1,181 4 0	
	<hr/>	
	8,086 4 0	
Carry forward	£171,653 2 0	

	Brought forward	£171,653 2 0
<b>VI. TEMPORARY LOAN—</b>		
£2,000 on Loan to Edinburgh Corporation		2,000 0 0
<b>VII. ESTIMATED VALUE of Building—</b>		
8 Eglinton Crescent	£5,000 0 0	
<b>VIII. ESTIMATED VALUE of Furniture, Paintings, Books, &amp;c.</b>	1,500 0 0	
		6,500 0 0
<b>IX. ARREARS OF SUBSCRIPTIONS considered recoverable</b>		253 6 6
<b>X. BALANCES at 30th November 1936</b>		1,834 13 10
<b>AMOUNT OF GENERAL FUNDS</b>		<b>£182,241 2 4</b>
<b>XI. SPECIAL FUNDS—</b>		
<b>TWEEEDDALE GOLD MEDAL FUND—</b>		
£805 London and North-Eastern Railway Co. 4 per cent Debenture Stock, at 107½		£650 7 6
£100 3 per cent Local Loans Stock, at 98		98 0 0
		£748 7 6
<b>FIFE AND KINROSS PERPETUAL GOLD CHALLENGE CUP FUND—</b>		
£268 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£225 2 5	
£201 Do. do. 4 per cent First Guaranteed Stock, at 102½	206 0 6	
Sum on Deposit Receipt with British Linen Bank	42 18 10	
		174 1 9
<b>PAISLEY PERPETUAL GOLD CHALLENGE CUP FUND—</b>		
£802 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£673 13 7	
Sum on Deposit Receipt with British Linen Bank	93 8 1	
		767 1 8
<b>RENFREWSHIRE PERPETUAL GOLD CHALLENGE CUP FUND—</b>		
£668 London and North Eastern Railway Co. 3 per cent Debenture Stock, at 84	£561 2 5	
Sum on Deposit Receipt with British Linen Bank	86 4 5	
		647 6 10
<b>WILLIAM TAYLOR MEMORIAL PRIZE FUND—</b>		
£401 London and North-Eastern Railway Co. 3 per cent Debenture Stock, at 84	£336 16 10	
Sum on Deposit Receipt with British Linen Bank	72 7 3	
		409 4 1
<b>WILLIAM DUTHIE PERPETUAL SILVER CHALLENGE CUP FUND—</b>		
£260 2½ per cent Consolidated Stock, at 85		221 0 0
<b>THE JAMES ARCHIBALD PRIZE—</b>		
£612, 1s. 6d. 3½ per cent War Loan, at 106½		650 6 8
<b>KINMONTH GOLD QUAIICH FUND—</b>		
£46, 13s. 6d. 3½ per cent War Loan, at 106½		49 12 0
<b>BALANCES WITH BANKS at 30th November 1936</b>		117 2 8
<b>AMOUNT OF SPECIAL FUNDS</b>		<b>£4,084 3 2</b>

EDINBURGH, 29th December 1936.—As Auditor of the Highland and Agricultural Society of Scotland, I have examined the Securities for the Investments as detailed in the above States of Funds and have found them in order. The Titles to the Heritable Estate and the Bonds for Sums lent on Heritable Security are certified by the Society's Law Agents to be in order.

GEO. JAMES GREGOR, C.A.

HOME, Treasurer.

F. J. CARRUTHERS, Hon. Secretary.

EDINBURGH, 6th January 1937.



# **ABSTRACT of the ACCOUNTS of the HIGHLAND and**

## **CHARGE.**

1. BALANCES at 30th November 1935 . . . . .	£1,860 11 11	
2. ARREARS of Subscriptions outstanding at 30th November 1935 . . . . .	£253 8 6	
Whereof due by Members who have compounded for life, and whose arrears are thereby extinguished . . . . .	14 0 0	239 8 6
3. INTERESTS AND DIVIDENDS—		
(1) Interests—		
On Heritable Bonds, less Income-tax . . . . .	£336 6 8	
On Railway Debenture and Preference Stocks, do. . . . .	1,333 1 4	
On Colonial Government Stocks, do. . . . .	298 5 0	
On British Government Stocks, do. . . . .	1,382 4 6	
On Temporary Loans, do. . . . .	48 3 5	
	£3,393 0 11	
(2) Dividends on Bank Stocks, less Income-tax . . . . .	1,366 4 11	4,759 5 10
4. SUBSCRIPTIONS—		
Annual Subscriptions . . . . .	£2,467 8 6	
Life Subscriptions . . . . .	1,211 4 0	3,678 12 6
5. 'TRANSACTIONS'—Sales and Other Receipts . . . . .	41 15 9	
6. INCOME-TAX repaid for year to 5th April 1936 . . . . .	1,214 7 6	
7. BALANCE of Receipts from Aberdeen Show, 1935 . . . . .	258 11 11	
8. RECEIPTS from Melrose Show, 1936 . . . . .	19,385 18 3	
9. N.D.D. EXAMINATION at Ayr, 1935—Refund of Expenses . . . . .	129 13 1	
10. TEMPORARY LOANS uplifted . . . . .	£4,500 0 0	
Less lodged . . . . .	1,000 0 0	3,500 0 0
11. INVESTMENT repaid . . . . .	2,500 0 0	
12. DEPOSIT RECEIPTS uplifted . . . . .	£2,500 0 0	
Less lodged . . . . .	2,500 0 0	- - -
13. MISCELLANEOUS RECEIPT . . . . .	0 13 9	
<b>SUM OF CHARGE . . . . .</b>	<b>£37,018 19 0</b>	

**EDINBURGH, 29th December 1936.**—As Auditor of the Highland and Agricultural Society for the year ending 30th November 1936 and have found them to be Accounts I have prepared an Account of Charge and Discharge of the Intremissions 1936, of which the above is an Abstract.

**EDINBURGH, 6th January 1937.**

**AGRICULTURAL SOCIETY of SCOTLAND for Year 1935-1936.****DISCHARGE.**

<b>1. ESTABLISHMENT EXPENSES—</b>		
Salaries and Wages and Allowance for Cleaning	£3,234 0 0	
Allowances to Mrs Simpson and Mrs Cowie	180 0 0	
Feu-duty, £22, 13s. 2d.; Rates and Taxes, £113, 0s. 9d.	185 12 11	
Coal, Gas, and Electric Light	78 3 1	
Insurances, £44, 16s. 6d.; Special Annuity Premium, £51, 8s. 9d.; Telephone and Telegrams, £67, 18s. 6d.; Repairs and Furnishings, £73, 18s. 8d.	342 7 5	
	<b>£3,815 8 5</b>	
<b>2. FEE to Auditor of Accounts for 1934-1935</b>	<b>120 0 0</b>	
<b>3. EDUCATION—N.D.A. Examination</b>	<b>50 18 11</b>	
<b>4. CHEMICAL DEPARTMENT—</b>		
Fee to Chemist	£100 0 0	
Analyses for Members and Expenses	266 19 8	
	<b>366 19 8</b>	
<b>5. VETERINARY DEPARTMENT—Medals to Students.</b>	<b>24 1 0</b>	
<b>6. DAIRY DEPARTMENT—N.D.D. Examination, 1935</b>	<b>87 0 3</b>	
<b>7. DAIRY DEPARTMENT, 1936—</b>		
Expenses of N.D.D. Examination held at Ayr	£276 10 6	
Less Entry Fees.	179 11 0	
	<b>96 19 6</b>	
<b>8. SOCIETY'S 'TRANSACTIONS'</b>	<b>1,636 11 9</b>	
<b>9. ORDINARY Printing, £223, 12s. 8d.; Advertising, £50, 14s. 3d.; Stationery, Books, &amp;c., £183, 11s.; Postages and Receipt Stamps, £140, 7s. (d.)</b>	<b>508 5 5</b>	
<b>10. SALARY to Consulting Engineers</b>	<b>300 0 0</b>	
<b>11. SALARY to Clerk of Works (7 months)</b>	<b>175 0 0</b>	
<b>12. MISCELLANEOUS Payments</b>	<b>385 16 10</b>	
<b>13. BALANCE of Expenses in connection with Aberdeen Show, 1935</b>	<b>£187 15 0</b>	
Less Received from Special Fund	21 8 4	
	<b>166 6 8</b>	
<b>14. EXPENSES in connection with Melrose Show, 1936—</b>		
Premiums, £3933, 5s.; Medals, £30, 19s. 6d.; Expenses of Show, £15, 13s, 2s. 8d. (as per page 449)	19,154 7 2	
<b>15. PREMIUMS and Medals for Local Shows and District Competitions</b>	<b>885 11 9</b>	
<b>16. CERTIFICATES and Medals for Long Service</b>	<b>184 11 4</b>	
<b>17. EXPENSES in connection with visiting sites for future Shows and attending Meetings, &amp;c.</b>	<b>84 2 7</b>	
<b>18. SPECIAL GRANTS—</b>		
Animal Diseases Research Association, £200; Glasgow Veterinary College, £100; Scottish Agricultural Organisation Society, £100; Scottish Committee on Contagious Bovine Abortion, £333, 6s. 8d.; other Grants, £62, 2s.	795 8 8	
<b>19. INVESTMENTS made—</b>		
Cost of £2500 3 per cent Funding Loan	£2,592 9 9	
Cost of £3200 3½ per cent War Loan	3,402 6 0	
	<b>5,994 15 9</b>	
<b>20. ARREARS removed from Subscription List at 30th November 1936</b>	<b>108 12 0</b>	
<b>21. ARREARS of Subscriptions outstanding at 30th November 1936</b>	<b>353 6 8</b>	
<b>22. BALANCES at 30th November 1936—</b>		
On Account Current with Royal Bank of Scotland—		
Edinburgh Account	£1,652 8 9	
London Account	181 15 0	
	<b>£1,834 3 9</b>	
In hands of Secretary	0 10 1	
	<b>1,834 13 10</b>	
<b>SUM OF DISCHARGE</b>	<b>£37,018 19 0</b>	

Society of Scotland, I beg to report that I have examined the Books and Accounts<sup>o</sup> correctly stated and sufficiently vouched and instructed. From the Books and of the Treasurer with the Funds of the Society for the year ending 30th November

GEO. JAMES GREGOR, C.A.

HOME, Treasurer.

F. J. CARRUTHERS, Hon. Secretary.

## ABSTRACT of the ACCOUNTS

## CHARGE.

## 1. AMOUNT COLLECTED DURING SHOW—

Gates . . . . .	£7,995 2 1
Grand Stand . . . . .	2,078 12 9
Catalogues and Awards . . . . .	772 6 1
Tickets sold . . . . .	33 0 7
Chauffeurs' Tickets . . . . .	41 18 6
Cloak-Rooms and Lavatories . . . . .	133 4 7

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 £11,054 4 7

2. FORAGE SOLD . . . . . 3 8 11

3. MOTOR ENCLOSURES . . . . . 1,007 19 6

## 4. RENT OF STALLS—

Implement and other Exhibits . . . . .	£3,550 12 6
Stock Exhibits . . . . .	2,459 10 6
	<hr/> 6,010 3 0

5. RENT OF REFRESHMENT BOOTHS . . . . . 560 0 0

6. ADVERTISEMENTS IN CATALOGUE AND PREMIUM LIST . . . . . 318 17 11

7. SUBSCRIPTIONS IN AID OF PREMIUMS . . . . . 369 10 0

8. MISCELLANEOUS . . . . . 11 14 4

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 £19,335 18 3

*Note.*—To the credit balance of  
 „ Add Sums due by Exhibitors for fitting up of stands, &c.,  
 amounting to . . . . . 186 2 4

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 £19,335 18 3

From the above balance there falls to be deducted

Premiums undrawn at 30th November 1936 . . . . .	£181 15 0
Accounts outstanding . . . . .	16 17 9
	<hr/> 198 12 9

 Making the probable surplus . . . . . £169 0 8

EDINBURGH, 6th January 1937.

## of the MELROSE SHOW, 1936.

## DISCHARGE.

<b>1. SHOWYARD—</b>		
Fitting up of Showyard . . . . .	£2,600	0 0
Bell & Sims Ltd.—Hire of Timber . . . . .	4,173	6 8
Thomas Black & Sons Ltd.—Hire of Canvas . . . . .	1,589	18 7
Rosettes, £43, 18s. 9d.; Penning and Cartage Charges on Poultry, £34, 2s. 6d.; Horse-Shoeing, £11, 4s. 10d.; Butter-making, £69, 1s. 10d.; Sheep Dog Demonstration, £20, 0s. 0d.; Electric Light and Power, £35, 9s. 6d.; Hire of Sleepers and Cartage, £195, 14s. 10d.; Office Luggage, £7, 10s. 0d.; Toilet Requisites, &c., £11, 9s. 5d.; Water Pipes, £65, 0s. 0d.; Gas Pipes, £49, 6s. 4d.; Laying Pipes, £12, 19s. 0d.; Miscellaneous, £70, 14s. 5d. . . . .	626	11 5
Salary to John Reid, Showyard Erector . . . . .	500	0 0
	£9,489	16 8
<b>2. FORAGE AND BEDDING FOR STOCK . . . . .</b>	306	14 4
<b>3. POLICE . . . . .</b>	198	11 7
<b>4. TRAVELLING EXPENSES of Judges, Stewards, and Staff . . . . .</b>	256	18 2
<b>5. HOTELS AND LUNCHEONS—</b>		
Hotels for Directors, Stewards, and Judges . . . . .	£262	14 10
Luncheons in Showyard for Directors, Judges, Attending Members, Royal Party, Pressmen, Staff (including accommodation), Breakfasts, and Teas . . . . .	516	11 6
	779	6 4
<b>6. ASSISTANTS and Show Staff . . . . .</b>	566	18 9
<b>7. MUSIC and Military Display Teams . . . . .</b>	578	15 8
<b>8. PRINTING, Members' Badges, Stationery, &amp;c. . . . .</b>	1,416	7 10
<b>9. ADVERTISING and Bill-posting . . . . .</b>	941	11 7
<b>10. FORESTRY Exhibition, £40; Bacon Pig Competition, £15, 15s. 4d.; Flower Show, £49, 0s. 0d.; Concert for Attendants, £7, 4s. 8d. . . . .</b>	112	0 0
<b>11. VETERINARY SURGEON . . . . .</b>	21	0 0
<b>12. SHOW TREASURER . . . . .</b>	100	0 0
<b>13. POSTAGES . . . . .</b>	127	19 5
<b>14. POST OFFICE and Telephones . . . . .</b>	12	18 2
<b>15. AMBULANCE . . . . .</b>	15	0 2
<b>16. INSURANCE . . . . .</b>	119	14 9
<b>17. MISCELLANEOUS . . . . .</b>	96	9 3
	£15,185	2 8
<b>18. PREMIUMS drawn at 30th November 1936 . . . . .</b>	4,019	4 6
	£19,154	7 2
<b>CREDIT BALANCE . . . . .</b>	181	11 1
	£19,335	18 3

HOME, *Treasurer.*F. J. CARRUTHERS, *Hon. Secretary.*GEO. JAMES GREGOR, C.A., *Auditor.*

# **ABSTRACT of the ACCOUNTS of the CHARGE.**

## **I. FUNDS as at 30th November 1935—**

£3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock . . . . .	£2,650 0 0
£5,551, 16s. 3d. 3½ per cent Conversion Stock . . . . .	4,216 18 2
£500 Queensland 8½ per cent Inscribed Stock, 1950-70 . . . . .	450 1 0
£412 London Midland and Scottish Railway Company 4 per cent Debenture Stock . . . . .	611 10 6
£190 London Midland and Scottish Railway Company 4 per cent Guaranteed Stock . . . . .	259 1 11
	<b>£8,187 11 7</b>

## **BALANCES with Royal Bank of Scotland—**

On Account Current . . . . .	£252 3 3	
On Deposit Receipt . . . . .	176 10 4	
	<hr/>	428 13 7
		<b>£8,616 5 2</b>

## **II. INTEREST ON INVESTMENTS—**

On £3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock, for year to 30th June 1936	£96 15 10	
Less tax . . . . .	22 3 0	
	<hr/>	£73 12 10
On £5,551, 16s. 3d. 3½ per cent Conversion Stock, for year to 1st October 1936 . . . . .	£194 6 2	
Less tax . . . . .	44 18 6	
	<hr/>	149 7 8
On £500 Queensland 8½ per cent Inscribed Stock, 1950-70, for year to 30th June 1936	£17 10 0	
Less tax . . . . .	4 0 10	
	<hr/>	13 9 2
On £412 London Midland and Scottish Rail- way Company 4 per cent Debenture Stock, for year to 30th June 1936 . . . . .	£16 9 6	
Less tax . . . . .	3 16 3	
	<hr/>	12 13 3
On £190 London Midland and Scottish Rail- way Company 4 per cent Guaranteed Stock, for year to 30th June 1936 . . . . .	£7 12 0	
Less tax . . . . .	1 15 2	
	<hr/>	5 16 10
	<hr/>	<b>254 19 9</b>

III. INTEREST ON DEPOSIT RECEIPT . . . . . 1 14 11

IV. INCOME-TAX repaid for year to 5th April 1936 . . . . . 74 12 2

SUM OF CHARGE **£8,947 12 0**

## ARGYLL NAVAL FUND for the Year 1935-1936.

## DISCHARGE.

## I. ALLOWANCES to the following six Recipients—

J. H. Dundas (seventh year)	.	.	.	.	.	£40	0	0
D. B. N. Mellis (seventh year)	.	.	.	.	.	40	0	0
C. D. Madden (fourth year)	.	.	.	.	.	40	0	0
D. V. M. Macleod (third year)	.	.	.	.	.	40	0	0
N. D. Campbell (third year)	.	.	.	.	.	40	0	0
R. L. Alexander (second year)	.	.	.	.	.	20	0	0
						<hr/>		
						£220	0	0

## II. MISCELLANEOUS—

John Menzies & Co.—Advertising	.	.	.	.	.	7	5	9
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## III. FUNDS at 30th November 1936—

£3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock	.	£2,650	0	0
£5,551, 16s. 3d. 3½ per cent Conversion Stock	.	4,216	18	2
£500 Queensland 3½ per cent Inscribed Stock, 1950-70	.	450	1	0
£412 London Midland and Scottish Railway Company 4 per cent Debenture Stock	.	611	10	6
£190 London Midland and Scottish Railway Company 4 per cent Guaranteed Stock	.	259	1	11
<hr/>				
£8,187 11 7				

*Note.*—The above Funds are entered at cost price. The market value at 30th November 1936 was £9,792, 2s. 8d.

## Balances with Royal Bank of Scotland—

On Account Current	.	£354	9	5
On Deposit Receipt	.	178	5	3
<hr/>				
532 14 8				
<hr/>				
8,720 6 3				

SUM OF DISCHARGE . . . £8,947 12 0

HOME, *Treasurer.*

F. J. CARRUTHERS, *Hon. Secretary.*

GEO. JAMES GREGOR, C.A., *Auditor.*

**VIEW OF RECEIPTS AND PAYMENTS for Year 1935-1936.****RECEIPTS.**

1. ANNUAL SUBSCRIPTIONS AND ARREARS received . . . . .	£2,344	18	6
2. LIFE SUBSCRIPTIONS . . . . .	1,211	4	0
3. INTERESTS AND DIVIDENDS—			
Interests . . . . .	£3,393	0	11
Dividends . . . . .	1,366	4	11
			<hr/>
4. 'TRANSACTIONS'—Sales and other Receipts . . . . .		4,759	5 10
5. INCOME-TAX repaid for year to 5th April 1936 . . . . .		41	15 9
6. BALANCE OF RECEIPTS from Aberdeen Show, 1935 . . . . .		1,214	7 6
7. RECEIPTS from Melrose Show, 1936 . . . . .		258	11 11
8. N.D.D. EXAMINATION at Ayr, 1935—Refund of Expenses . . . . .		19,385	18 3
9. MISCELLANEOUS . . . . .		129	13 1
		0	18 9
			<hr/>
	£29,296	8	7

**PAYMENTS.**

1. ESTABLISHMENT EXPENSES—			
Salaries and Wages and Allowance for Cleaning	£3,234	0	0
Retiring Allowances	130	0	0
Fen-duty, Taxes, Coal, Gas and Electric			
Light, Insurance, Repairs, and Furnishings	451	3	5
			<hr/>
	£3,815	3	5
2. FEE TO AUDITOR of Accounts, 1934-1935 . . . . .	120	0	0
3. EDUCATION—N.D.A. Examination, 1936 . . . . .	50	18	11
4. CHEMICAL DEPARTMENT . . . . .	366	19	8
5. VETERINARY DEPARTMENT . . . . .	24	1	0
6. DAIRY DEPARTMENT—N.D.D. Examination, 1935 . . . . .	87	6	3
7. DAIRY DEPARTMENT—N.D.D. Examination, 1936 . . . . .	96	19	6
8. SOCIETY'S 'TRANSACTIONS' . . . . .	1,636	11	9
9. ORDINARY Printing, Advertising, Stationery,			
Books, and Postages . . . . .	598	5	5
10. SALARY to Consulting Engineers . . . . .	300	0	0
11. SALARY to Clerk of Works (7 months) . . . . .	175	0	0
12. MISCELLANEOUS Payments . . . . .	385	16	10
13. BALANCE OF PAYMENTS on account of Aberdeen			
Show, 1935 . . . . .	166	6	8
14. PAYMENTS on account of Melrose Show, 1936—			
1. Premiums and Medals . . . . .	£4,019	4	6
2. Expenses . . . . .	15,135	2	8
			<hr/>
	19,154	7	2
15. PREMIUMS AND MEDALS for Local Shows and Dis-			
trict Competitions . . . . .	835	11	9
16. CERTIFICATES AND MEDALS for Long Service . . . . .	134	11	4
17. EXPENSES in connection with visiting Sites for			
future Shows, attending Meetings, &c. . . . .	84	2	7
18. SPECIAL GRANTS—			
Animal Diseases Research Association, £200;			
Glasgow Veterinary College, £100; Scottish			
Agricultural Organisation Society, £100;			
Scottish Committee on Contagious			
Bovine Abortion, £883, 6s. 8d.; other			
Grants, £62, 2s. . . . .	795	8	8
			<hr/>
		23,827	10 11
BALANCE OF RECEIPTS . . . . .			<hr/>
		£468	17 8

HOME, *Treasurer.*F. J. CARRUTHERS, *Hon. Secretary.*GEO. JAMES GREGOR, C.A., *Auditor.*

EDINBURGH, 6th January 1937.

## PROCEEDINGS AT BOARD MEETINGS.

### MEETING OF DIRECTORS, 1st APRIL 1936.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive,  
in the Chair.

*Present.—Ordinary Directors*—Major R. F. Bröbner; Mr George Buchanan; Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr William Meiklem; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; the Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr John P. Sleigh; Mr A. A. Hagart Speirs; Mr Thomas Templeton; Mr Phipps O. Turnbull; Colonel Robert W. Walker; Mr T. G. Wilson; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr J. Hastie Brydon; Mr Ian M. Campbell; Mr John E. B. Cowper; Mr Andrew D. Elliot; Mr Thomas Elliot; Mr Hugh H. Fleming; Mr J. E. Kerr; Mr James Kilpatrick; Mr James M'Laren; Mr Robert Macmillan; Mr James Mitchell; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Major S. Strang Steel. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c. *Assistant Consulting Engineer*—Mr John B. Todd, B.Sc., Ph.D., &c.

#### *The late Mr F. W. Christie, Cupar.*

Before proceeding with the business of the Meeting, the Chairman referred, with deep regret, to the death of Mr F. W. Christie, Cupar, Fife, whose membership of the Society dated back to 1879, and who on various occasions had served as a member of the Board of Directors. Mr Christie, he said, was an outstanding figure in agricultural affairs in the County of Fife, where, at one time, he farmed extensively, and was a successful breeder and exhibitor of Shorthorn Cattle and Border Leicester Sheep. It was, however, on the administrative side of Agriculture that he rendered most notable service. He was associated with many movements calculated to further the interests of Agriculture, and, in particular, he acted as Secretary of the Fife Agricultural Society, to which body he rendered devoted service for a period of over thirty years. His faithful attention to his many public duties, and his genial personality and kindly disposition, secured for him the regard and esteem of a wide circle of friends, by whom his death was deeply mourned.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the widow and family of the deceased.

#### *Eradication of Bracken.*

A letter was submitted from the Department of Agriculture for Scotland, forwarding copy of a Scheme which had been authorised by the Secretary of State for Scotland for assistance in the destruction of bracken.



*Melrose Show, 1936.*

*Parade of Foxhounds.*—A letter was read from the President, The Duke of Buccleuch, stating that if the Directors would like a parade of Foxhounds, for about six or seven minutes each day in the Parade Ring, he felt sure that the Border Hunts would be very willing to co-operate.

After discussion, it was decided to adopt the suggestion for a parade of Foxhounds on the Wednesday, Thursday, and Friday afternoons, and it was remitted to Major R. W. Sharpe to make inquiries and report to next Meeting of the Board as to the arrangements which would require to be made.

*Free Stands.*—It was decided to grant the following applications for free stands:—*The Scottish National Federation for the Welfare of the Blind, Aberdeen.*—30 feet in Section 6. *The International League to Prevent the Export of Horses for Butchery.*—10 feet in Section 5.

*S.W.R.I. Stand.*—Letters were read from Mrs Jamieson, Honorary Secretary, Roxburghshire Federation, S.W.R.I., forwarding Sketch and Plan of the Timber House in which it was proposed the Institute's exhibit should be placed. Application was made for permission to sub-let the upstairs rooms in the house to other exhibitors, but this was not granted. A request to be allowed to publish and sell a catalogue of exhibits, at a small charge of, say, 1d., was agreed to, and it was also decided to give sufficient ground for a small garden in front of the building.

*Official Decorators.*—It was decided that Messrs Robert Tainsh, Ltd., 2 Castle Street, Edinburgh, who had taken over the decorating business of Messrs Rentons, Ltd., Edinburgh, be appointed Official Decorators for the Show.

*Entrance Gates.*—It was decided that, as the principal Motor Enclosure was at the opposite end of the Showground from the Main Entrance, a subsidiary entrance be provided leading from the Motor Enclosure into the Showyard.

*Alloa Show, 1937.*

It was decided that the date of the Show at Alloa in 1937 be fixed for the 22nd to the 25th June inclusive.

*Show of 1938.*

It was decided that the following be appointed a Committee to visit and inspect available sites for the Show of 1938, and report: Mr James Durno, Mr George Grant, Mr John W. Prentice, Mr J. P. Ross-Taylor, Major R. W. Sharpe, Mr Thomas Templeton, with the Chairman, Treasurer, and Honorary Secretary, *ex officio*.

*Proposed Subsidy for Oats.*

The Secretary reported that, as instructed at last Meeting, copies of the Policy formulated by the National Farmers' Union of Scotland for a subsidy for Oat Growers had been circulated to Members of the Board with a view to its consideration at that Meeting.

In the course of a discussion which followed, it appeared that, since last Meeting, a deputation representing the National Farmers' Union and other bodies had been received in London by the Secretary of State for Scotland and Members of Parliament. In view of this, it was decided that no action be taken in the meantime.

*Live Stock Industry.*

Mr J. P. Ross-Taylor, Mungoswalls, Duns, reported that a deputation, representing the Scottish Joint Committee, had been received in London on 4th March by the Secretary of State for Scotland, the Minister of Agriculture and Fisheries, the English Unionist Agricultural Committee, and the Scottish Unionist Members' Committee. At these Meetings the deputation had presented the case for the Policy formulated by the Scottish Joint Committee, in detail, stressing the need for the recognition of quality, so that home breeders should get a fair share of any subsidy or assistance that might be decided upon in the Long-Term Policy. They were all very gratified to find that those whom they met appeared to be in

favour of that view. They had also stressed the point that in any Live Stock Scheme which may be formulated a standard price should be fixed.

On the suggestion of the Minister of Agriculture, they met certain members of the Cattle Committee on 5th March, with whom they discussed the method by which quality could best be recognised.

*Salaries Scale for Society's Staff.*

Mr George Buchanan, Hunterhill Farm, Paisley, moved the following Motion, notice of which had appeared under his name on the Agenda of the Meeting :—

"That it be remitted to the Finance Committee to consider the question of adopting a Scale of Salaries, and also a Superannuation Scheme, for Members of the Society's Staff, and report."

The Motion was not seconded, and the matter accordingly dropped.

*Scottish Plant Registration Station.*

A letter was submitted from the Secretary of the Standing Committee of Management of the Scottish Plant Registration Station, intimating that Mr James Elder was unable to accept nomination as one of the Society's representatives on the Committee.

It was unanimously decided to nominate Major R. F. Brebner, The Leuchold, Dalmeny House, Edinburgh, as a representative of the Society on the Standing Committee, in place of Mr Elder.

*Finance.*

A Minute of Meeting of Committee, dated 1st April, was submitted and approved. The Minute dealt with the following matters :—

*Craibstone School of Rural Domestic Economy.*—After careful consideration, the Committee had decided, with regret, to recommend that the application for a grant to provide bursaries for students attending a second Course at the Craibstone School of Rural Domestic Economy be not entertained. In arriving at this decision, the Committee were aware of the valuable work being done by the School, but felt it must be recognised that if such a grant were given to the Craibstone School, similar grants could not be refused to the West of Scotland Agricultural College and the Edinburgh and East of Scotland College of Agriculture.

*Joint Committee of British Live Stock Breeders.*—The Committee were of opinion that membership of this Joint Committee was more appropriate for Breeders and Breed Societies than for an Agricultural Society, and it was accordingly recommended that the annual subscription of £1, 1s. by the Society to the Joint Committee be discontinued.

MEETING OF DIRECTORS, 6TH MAY 1936.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr George Buchanan; Mr James Durno; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr Alexander Murdoch; Mr James Paton; Mr Gavin Ralston; Lord Rowallan; the Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr Thomas Templeton; Mr T. G. Wilson; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr Ian M. Campbell; Mr John E. B. Cowper; Mr John Hewetson; Mr J. E. Kerr; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Major S. Strang Steel; Mr James B. Stewart. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—Mr J. F. Tocher, D.S.C., F.I.C. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c.

*Chairman.*

The Secretary read a letter from the Chairman of Directors, Mr Robert Macmillan of Holm of Dalquhairn, Woodlea, Moniaive, in which he stated that, on

account of illness, he would be unable to be present at the Meeting of Directors, and requested that his apology be intimated.

On the motion of Mr Alexander Murdoch, East Hallside, Cambuslang, Colonel F. J. Carruthers of Dormont was unanimously called to the Chair.

Colonel Carruthers, on taking the Chair, said he was sure they would wish to extend to Mr Macmillan their sympathy with him in his indisposition, and their wishes for a speedy recovery.

*The late Colonel Steuart-Fotheringham of Murthly.*

Before proceeding with the business of the Meeting, the Chairman referred, with deep regret, to the death of Colonel Steuart-Fotheringham of Murthly, who had been a Member of the Society for over forty years, and who had served for a term as an Ordinary Director and had also filled the office of Vice-President. Colonel Steuart-Fotheringham, he said, took a very active interest in public affairs, as was evidenced by the fact that he held, at different times, the Convenerships of both Perth and Angus County Councils. He was keenly interested in Agriculture, and more especially in Forestry. He was a member of the Forestry Commission, and as a member of the Society's Forestry Committee he rendered valuable service to the Society.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*Melrose Show.*

*Catering.*—A Minute of Meeting of Catering Committee, dated 1st April, was submitted and approved.

The Minute stated that one of the Caterers appointed on 4th March was unable to obtain a Licence, and the Committee had accordingly decided to recommend that there be only three Licensed Catering Stands this year, but that the seating accommodation in these be increased so as to provide additional lunching facilities.

*Parade of Foxhounds.*—A letter was read from the President, The Duke of Buccleuch, with reference to the Parade of Foxhounds, and stating that, if necessary, the Buccleuch Pack would take part on two days. Major R. W. Sharpe of The Park, Earleton, said the Lauderdale Pack could take part on one day. It was accordingly decided that the Buccleuch Pack be asked to parade on the afternoons of Wednesday and Friday, and the Lauderdale Pack on Thursday.

*Appointment of Assistant Steward.*—The Secretary intimated that, on account of serious illness, Mr J. P. Brown, Dipple, Fochabers, Assistant Steward of Gates, would be unable to be present at the Show.

On the motion of Mr Ian M. Campbell, Bal Blair, Inverashin, it was decided to appoint Mr Andrew D. Elliot of Kettelshiel, Greenlaw, to act as Assistant Steward that year.

On the motion of the Chairman, the Secretary was instructed to convey to Mr Brown their sympathy with him in his illness and their hopes for his speedy recovery.

*Scottish Bacon Pig Competition.*—The following Directors were nominated to represent the Board of Directors on the Scottish Bacon Pig Competition Committee: Mr John E. B. Cowper, Captain Thomas Elliot, and Mr James Wither.

*Sheep Dog Demonstration.*—The Secretary reported that Mr J. M. Wilson, Whitehope, Innerleithen, who had given the Sheep Dog Demonstrations at the Show for several years, would again demonstrate that year.

*S.W.R.I.*—Permission was granted for the setting up of a Market Stall in connection with the free stand previously granted.

*Shepherds' Pack Sheep.*—It was decided that, in the Shepherds' Pack Classes, a lamb entered with a ewe, in a Class for Ewe with Lamb at Foot, might also be entered in the Ewe Lamb Class.

Some discussion took place as to the general application of this concession, and it was decided to refer the matter to the Stewards for consideration and report to the November Meeting.

*Scottish Command.*—On an application from General Sir A. R. Cameron, Commanding-in-Chief, Scottish Command, it was decided to grant space for a marquee at the Show to be used as an Army Information Bureau.

*Eradication of Bracken.*

The Secretary stated that he had received a letter, dated 3rd April, from the National Farmers' Union of Scotland, with reference to the Scheme which the Secretary of State for Scotland had authorised to be administered for assistance in the destruction of Bracken. The letter stated that it could not be other than disappointing to the organisations interested to know that, under the present scheme, financial assistance was to be so limited, and confined to cutting by machinery. There were many farmers who, on account of circumstances, would be unable to avail themselves of the Government's offer of assistance, and the question now arose whether further representations should be made to the Secretary of State for Scotland. It was not suggested to call a Conference, but each organisation was invited by the Union to express its views on the Draft Scheme.

After discussion, it was decided to appoint the following small Committee to consider the Scheme, and report as to suggestions for amendment: Mr Ian M. Campbell, *Convener*; Captain Thomas Elliot, Major S. Strang Steel, with the Chairman, Treasurer, and Honorary Secretary, *ex officio*.

*Animal Diseases Research Association.*

An application from the Animal Diseases Research Association for a renewal for the current year of the grant of £200, which had been given for the past ten years, was submitted.

On the recommendation of the Finance Committee, it was decided that the application be granted.

*Glasgow Veterinary College.*

An application from the Glasgow Veterinary College for a renewal for the current year of the grant of £100, which had been given for the past six years, was submitted.

On the recommendation of the Finance Committee, it was decided that the application be granted.

*Finance.*

A Minute of Meeting of Committee, dated 8th May, was submitted and approved.

The Minute dealt with the following matters:—

*Contagious Bovine Abortion.*—A letter had been submitted from the Scottish Committee on Contagious Bovine Abortion, pointing out that, in order to secure closer co-operation in the work on Contagious Bovine Abortion, the Agricultural Research Council had suggested that the existing Scottish and English Committees should be combined. The Scottish Committee were willing to agree to this proposal, because, since the Committee was formed, there had been established, at the instance of the Agricultural Research Council, a Scottish Board of Research in Veterinary Science, which was charged with the duty of co-ordinating and directing all research into animal diseases in Scotland, financed wholly or partly from public funds. The Abortion Committee had accordingly decided to fall in with the suggestion of the Agricultural Research Council on the understanding that (1) work on Contagious Bovine Abortion should continue to be carried out in Scotland under the general supervision of the Scottish Board of Research, and (2) the balance of the funds subscribed for work in Scotland should be handed over to the Scottish Board, and should continue to be expended in Scotland for the purpose for which they were subscribed, subject to the approval of the subscribers to this arrangement.

The Committee recommended that the Directors agree to the arrangements proposed.

*Grassland Congress, 1937.*—A report had been submitted by Mr James Wither, the Society's representative on the Main Organising Committee of the Congress to be held in this country in July 1937. Along with the report was a Draft Programme of the Proceedings, together with an Appeal, signed by the President and Honorary Secretary, for a contribution towards the expenses of the Congress. It was recommended that a sum of £25 be voted for this purpose.

*Show of 1938.*

The Secretary reported that he had that morning had a telephone message from the Town Clerk of Dumfries to the effect that a tentative arrangement had been come to with Mr Johnston, owner of Rotchell Park, for the use of the ground for the Show, for the sum of £400, and that the Provost would move, at a Meeting of Town Council to be held the next day, that the Town contribute a sum of £200 towards this amount.

After some discussion, Mr J. P. Ross-Taylor gave notice of the following Motion, which he would move at the Directors' Meeting and also at the Half-Yearly General Meeting to be held on 3rd June :—

"That the Dumfries Show Division be extended so as to include part of the County of Ayr."

## MEETING OF DIRECTORS. 3RD JUNE 1936.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr George Buchanan; Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr William Fraser; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr William Meiklem; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr Gavin Ralston; Lord Rowallan; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr John P. Sleigh; Mr Thomas Templeton; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr J. Hastie Brydon; Mr Andrew D. Elliot; Mr Thomas Elliot; Mr Hugh H. Fleming; Mr John Hewetson; Mr J. E. Kerr; Mr Robert Macmillan; Mr James Mitchell; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Mr James B. Stewart. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—J. F. Tocher, D.Sc., F.I.C. *Consulting Engineer*—Professor R. Stanfield, A.R.S.M., &c.

*The late Mr William Low of Balmakewan.*

Before proceeding with the business of the Meeting the Chairman referred, with deep regret, to the death of a former member of the Board—Mr William Low of Balmakewan. Mr Low, he said, served as a Director, representing the Aberdeen Show Division, for a period of nine years, from 1922 to 1930. He took a keen interest in the business of the Society, serving on most of the Standing Committees, and being especially interested in all matters of a scientific and educational nature. He devoted much of his time and ability to local administrative affairs, and occupied many important positions, including the Convener-ship of the County of Kincardine. In all these activities he displayed a sound judgment and grasp of detail which earned for him the respect and regard of all his colleagues. His death was a loss to agriculture and to the country, which they deeply regretted.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*Royal Patronage.*

The Secretary read a letter from Lord Wigram, dated 5th May, addressed to the President of the Society, The Duke of Buccleuch, intimating that His Majesty The King had been graciously pleased to grant his Royal Patronage to the Society. (Copy of the letter appears on page 484 of this Volume.)

*Letter.*

The following letter was submitted :—

*D. S. Fotheringham, Murthly.*—Expressing thanks for resolution of regret and sympathy on the death of his father, the late Colonel W. Stuart-Fotheringham.

*Show Dates.*

A letter was read from Mr T. B. Turner, Secretary of the Royal Agricultural Society of England, dated 7th May, in which he stated that the Council of that Society had now decided that in future the Royal Show should open upon the first Tuesday in July. This, while not going quite so far as the Highland Society wished, was an indication that the Royal Society desired to do everything it possibly could to avoid clashing with the Highland Show.

With reference to the letter, it was explained that what the Society's representatives had been pressing for was that the Royal Show should not open in any year earlier than 3rd July, so that the opening date of the Highland Show should never be earlier than 20th June. The Royal Society had gone some distance to meet these representations. Its decision, however, still meant that, if an interval of one clear week was to be retained between the Highland and the Royal Shows, every fifth or sixth year this Society's Show would require to commence as early as 17th June.

*Melrose Show, 1936 : Visit of H.R.H. The Duchess of Gloucester.*

The Chairman intimated that, in the unavoidable absence of the President, The Duke of Buccleuch, he was authorised by His Grace to announce that although, owing to his military duties, His Royal Highness The Duke of Gloucester would be unable to visit the Show, Her Royal Highness The Duchess of Gloucester hoped to visit the Show at Melrose on Wednesday, 24th, or Thursday, 25th June, or perhaps on both days. This announcement was particularly gratifying when it was realised that, on account of the death of His late Majesty, public engagements of all kinds had had to be declined. The visit of The Duchess of Gloucester, therefore, was to be regarded more as a personal visit, due to the Show being held in Her Royal Highness's own district, among her own people and neighbours, and under the Presidency of her brother, The Duke of Buccleuch.

The Chairman expressed the gratification of the Directors at the receipt of this announcement.

*Melrose Show, 1936.*

*Assistant Steward of Gates.*—Mr James Wither, Awhirk, Stranraer, was appointed an additional Steward of Gates, this being found necessary on account of the fact that, on this occasion, there would be two entrances to the Showground.

*Entries for Poultry, &c.*—The Secretary intimated the numbers of entries received in those sections in which the entries closed later than the sections for Stock.

*Show of 1938.*

A letter was read from the Town Clerk of Dumfries, dated 14th May, forwarding a contract entered into between Provost W. J. Kelly of Dumfries and Mr Andrew Johnston, Dumfries, with regard to the use of the ground at Rotchell Park as a site for the Society's Show in 1938. By the terms of this contract Provost Kelly undertook, as an individual, financial responsibility for the ground required for the Show.

Colonel F. J. Carruthers of Dormont said that this was in effect an offer of a free site for the Show.

Mr Alexander Murdoch moved that the Sites Committee go and inspect the ground, and this was agreed to. The date of the Sites Committee's visit was provisionally fixed for 12th June.

*Show Divisions.*

Mr J. P. Ross-Taylor, Mungoswells, Duns, submitted the following Motion, which appeared under his name on the Agenda :—

"That the Dumfries Show Division be extended so as to include part of the County of Ayr."

The Motion, he said, arose out of a discussion at the previous Meeting of Directors, when it was felt that if anything were to be done regarding the 1938 Show, the matter was somewhat urgent. It had, therefore, been agreed that he should give notice of a Motion for that Meeting, so that the Directors could discuss the matter. He had several reasons for giving notice of the Motion. It was a very long time since the Show Divisions had been apportioned, and, in that time, transport facilities had advanced enormously. They had in Dumfries a wide and important agricultural area, but, unfortunately, they had only one centre where it was practicable to hold a Show with any measure of success, while, in the North, they had the County Town of Ayr, at present in the Glasgow Division, and on that account almost, if not entirely, precluded from being looked upon as a Show centre. He did not think it was desirable that the Show should be limited to any one centre in any Division, as that might place the Society in a difficulty. If the Directors preferred that the matter be remitted to a Committee to explore not only what he considered an anomaly at Dumfries, but several anomalies which had arisen in past years in other parts of the country, he would be agreeable to that being done.

After some discussion in regard to procedure Mr Ross-Taylor moved in terms of the Motion, and this was seconded by Captain Thomas Elliot, Thirlestane, Lauder.

Colonel F. J. Carruthers moved, as an amendment, that the Motion be not adopted. There was, he said, no community of interest between the south-western counties and Ayrshire, except possibly for a small part of Wigtownshire. Ayrshire was almost entirely a dairying district. Dumfries, on the other hand, was largely pastoral. It was the home of the Galloway Cattle and of Blackface and Cheviot Sheep. As to the question of distance, Ayr was 59 miles by road from Dumfries, and only 35 miles from Glasgow. If they had the Show in Ayr, it would simply be having another Show in the Glasgow area. Glasgow was the proper centre for Ayrshire.

Colonel Carruthers' amendment was seconded by Mr John Hewetson, Baltorsan, Newton-Stewart.

After a prolonged discussion the question was put to the vote, when 20 voted for the Motion and 13 for the amendment. Mr Ross-Taylor's Motion was, therefore, declared carried.

At a later stage in the proceedings, on an appeal from the Treasurer, the Earl of Home, the question was reopened, the Meeting agreeing to suspend the Standing Orders to allow of this being done.

Further discussion ensued, after which Mr J. P. Ross-Taylor agreed to withdraw his Motion in favour of a Motion suggested by Mr Alexander Murdoch, East Hallside. This Motion, which was unanimously adopted, was in the following terms :—

"That it be remitted to a Committee to consider the whole question of Show Divisions, and to report."

The following Committee was then appointed :—

Glasgow, Mr Alexander Murdoch; Perth, Mr James Paton; Stirling, Mr J. E. Kerr; Edinburgh, Major R. F. Brebner; Aberdeen, Mr George Grant; Dumfries, Mr James Wither; Inverness, Mr William Fraser; Border, Mr J. P. Ross-Taylor; with the Chairman, Treasurer, and Honorary Secretary, *ex officio*.

*Live Stock Industry.*

Mr J. P. Ross-Taylor reported that representatives of the Scottish Joint Committee had attended in London in April, when they were received by representatives of the Cattle Committee. At that Meeting they submitted criticisms of the Weight and Dentition Scheme which the Cattle Committee had had under consideration, and further pressed the Scottish viewpoint that recognition of quality could best be attained by a deficiency payment based on the price of the animal rather than on its weight. He did not think the Cattle Committee had yet made up their minds as to what was best, but they were assured that every endeavour would be made to find the best working scheme, so that quality should be recognised.

*Animal Diseases Research Association.*

On the motion of the Earl of Home, K.T., it was unanimously agreed to confirm the proposed grant of £200 for the current year to the Animal Diseases Research Association.

*Glasgow Veterinary College.*

On the motion of the Earl of Home, K.T., it was unanimously agreed to confirm the proposed grant of £100 for the current year to the Glasgow Veterinary College.

*Science.*

A Minute of Meeting of Science Committee, dated 3rd June, was submitted and approved.

The Minute stated that, in accordance with the decision arrived at by the Directors on 5th February, a Meeting was held along with representatives of the trade, to consider the prices of Feeding-Stuffs as at that date. A Schedule of these prices was adjusted, and it was proposed that it be printed and issued in similar manner to the Schedule of Unit Prices issued in February.

*Finance.*

A Minute of Meeting of Committee, dated 3rd June, was submitted and approved.

The Minute dealt with the following matters:—

*Contagious Bovine Abortion.*—A letter had been received from the Secretary of the Scottish Committee on Contagious Bovine Abortion, applying for the third instalment of the grant of £1000 which the Society decided to contribute in 1934. The Committee recommended that the third and final instalment of £333, 6s. 8d. be paid forthwith.

*Highland Reel and Strathspey Society.*—The Committee recommended that the grant of £50 to the Highland Reel and Strathspey Society be renewed for the current year.

*International Commission of Agricultural Associations at Rome.*—A letter was submitted from the President of the Association with reference to the issue of the third volume of the 'International Guide to Agricultural Societies.' The letter requested the Society to send a donation of the same amount (£5) as was sent last year.

The Committee recommended that the Secretary be instructed to reply to the Association to the effect that the donation of £5 was not intended to be an annual one, and that no donation would be given at the present time.

*Show Jumping.*—A letter was submitted from the Secretary of the Scottish Show Jumping Association, suggesting that the Society become affiliated to that body by joining the Association and paying an annual subscription of £1, 1s. The Committee recommended that the suggestion be not adopted.

MEETING OF DIRECTORS HELD IN THE SHOWYARD,  
MELROSE, 24TH JUNE 1936.

Mr ROBERT MACMILLAN of Holm of Dalquhairn, Woodlea, Moniaive, in the Chair.

*Present.—Ordinary Directors*—Major R. F. Brebner; Mr George Buchanan; Mr Thomas Clark; Mr James Durno; Captain Thomas Elliot; Mr W. P. Gilmour; Mr George Grant; Mr James R. Lumsden; Mr William Meiklem; Mr Alexander Murdoch; Dr T. G. Naemyth; Mr James Paton; Mr Charles W. Ralston; Mr Gavin Ralston; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr John P. Sleigh; Mr A. A. Hagart Speirs; Mr Thomas Templeton; Mr Phipps O. Turnbull; Colonel Robert W. Walker; Mr T. G. Wilson; Mr James Wyllie. *Extraordinary Directors*—Mr Ian M. Campbell; Mr John E. B. Cowper; Mr Thomas Elliot; Mr Hugh H. Fleming; Mr John Hewetson; Mr J. E. Kerr; Mr James Kilpatrick; Mr James M'Laren; Mr Robert Macmillan; Mr James Mitchell; Mr R. A. Robertson; Mr J. P. Ross-Taylor; Major S. Strang



Steel; Mr James B. Stewart. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Auditor*—George James Gregor, C.A.

#### *Protests.*

The Secretary reported that no protests had been lodged.

#### *Precepts.*

The Chairman was authorised to sign the Precepts for the prizes awarded at the Melrose Show. Authority was given to draw upon the Society's Ordinary Funds to meet any deficit on the Show Account, and also, if necessary, to obtain an Overdraft from the Bank of a sum not exceeding £2000.

#### *Meeting of Members.*

The Programme of Business for the Meeting of Members to be held that afternoon was arranged.

#### *Show of 1938.*

The Secretary reported that it had been found impossible to arrange for a visit of the Sites Committee to Dumfries prior to that date. In the meantime, a letter had been received from the Lockerbie Agricultural Society with respect to a site near Lockerbie House, and inviting the Society to visit and inspect it.

It was decided that the Committee should, at an early date, visit the prospective sites at Lockerbie and Dumfries. Power was given to the Committee to accept the offer of the site at Dumfries, if they were satisfied regarding it, but if they were not agreed as to this, a Special Meeting of Directors should be called.

### MEETING OF DIRECTORS, 4TH NOVEMBER 1936.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, and afterwards Mr J. P. ROSS-TAYLOR, Mungoswells, Duns, in the Chair.

*Present.—Ordinary Directors*—Mr John D. Allan; Major R. F. Brebner; Mr William Brown; Mr Thomas Clark; Lieut.-Colonel Garden Beauchamp Duff, D.S.O.; Mr William I. Elliot; Mr George Grant; Mr J. E. Kerr; Mr James R. Lumsden; Mr William Meiklem; Mr William Montgomery; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr J. P. Ross-Taylor; Lord Rowallan; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bertram Shields; Mr John P. Sleight; Mr A. A. Hagart Speirs; Mr Thomas Templeton; Mr Francis W. Walker; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr Walter A. Aitkenhead; Mr A. Y. Allan; Mr Ian M. Campbell; Mr John E. B. Cowper; Captain James Craig; Mr James Durno; Captain Thomas Elliot; Mr W. P. Gilmour; Mr John Hewatson; Mr James M'Laren; Mr William M'Laren; Mr Thomas M'Lay; Mr Gavin Ralston; Mr Peter Robertson; Mr Andrew Telfer; Mr T. G. Wilson. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—J. F. Tocher, D.Sc., F.I.C.

#### *The late Mr John Elliot.*

Before proceeding with the business of the Meeting, the Chairman referred, with deep regret, to the death of a former member of the Board—Mr John Elliot of Balnakiel, Galashiels.

Mr Elliot, he said, was an outstanding personality in the agricultural life of Scotland, and one of the most noted Sheep Breeders in the country. He carried on sheep farming on an extensive scale, not only in the Border Counties, but in Sutherlandshire, and he was a recognised authority on Cheviot and Black-face Sheep. In addition to his sheep-farming activities, he found time to take an active part in public affairs, and, in all these, his shrewd judgment and

cheerful outlook earned for him the regard and esteem of all with whom he was associated. He took a great interest in the affairs of the Society. He was a member for nearly fifty years, and served as a Director on that Board, with an interval of only two years, from 1916 to 1930. His services on many of the Standing Committees were of much value, and his death was a loss to the Society which they deeply deplored.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*The late Mr William Fraser.*

The Chairman also referred, with deep regret, to the death of a member of the Board—Mr William Fraser, Kneekonie, Forres. Mr Fraser, he said, joined the Board three years ago as a representative of the Inverness Show Division, and took an active interest in the work of the Society, especially in all matters of an educational and scientific nature. He took a prominent part in the public life of Moray, of which county he was for a time Vice-Convener, and he also acted for several years as Vice-Chairman of the Governors of the North of Scotland College of Agriculture.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*The late Lieut.-Colonel T. W. Cuthbert, C.M.G., D.S.O.*

The Chairman also referred, with deep regret, to the death of a former member of the Board Lieut.-Colonel T. W. Cuthbert, C.M.G., D.S.O., which occurred under tragic circumstances at Badcall, Scourie, Sutherland, in June last. He was a Member of the Society for over forty years, and he also served for some time as a Director. As Factor on the Ardross Estate, Ross-shire, he was a well-known figure in the North of Scotland, and his services during the first year of the war, in command of the 4th Seaforth Highlanders, earned for him the Honours of C.M.G. and D.S.O.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the relatives of the deceased.

*Chairman of the Board for 1936-37.*

On the motion of Major Robert W. Sharpe of The Park, Earlstoun, seconded by Captain Thomas Elliot, Thirlestane, Lauder, Mr J. P. Ross-Taylor, Mungoswall, Duns, was unanimously elected Chairman of the Board for the ensuing year.

Mr Ross-Taylor, on taking the Chair, thanked the Directors for the honour they had done him.

On the motion of Mr Alexander Murdoch, East Hallside, Cambuslang, the Secretary was instructed to convey to Mr Robert Macmillan of Holm of Dalquharrin, Woodlea, Moniaive, the cordial thanks of the Directors for his services as Chairman of the Board during the past two years.

*Letters.*

The following letters were submitted :—

*J. Hubert Low, Seabourne, Broughty Ferry.*—Thanking the Directors for resolution of regret and sympathy on the death of his father, the late Mr William Low of Balmakewan.

*Edinburgh Highland Reel and Strathspey Society.*—Expressing thanks for renewal of grant of £50 for the current year.

*University Forestry Society.*—Inviting the Society to nominate a representative to attend the Annual Presidential Address and Dinner on 26th November. It was decided that the Chairman of Directors be asked to represent the Society on that occasion.

*Melrose Show, 1936.*

*Visit of H.R.H. The Duchess of Gloucester.*—The Secretary intimated that he had received a letter from the President, the Duke of Buccleuch, in reply to

a letter he had written, on behalf of the Board of Directors, expressing their thanks for all that the President had done for the Show, and also asking him to convey to H.R.H. The Duchess of Gloucester their thanks for her visit to the Show. In reply, the President wrote on 7th July: "I must thank you for the very kind letter received from you on behalf of the Directors of the Highland and Agricultural Society. I am communicating your message to my sister, who will, I know, be very pleased that her visit was helpful. I have heard from her that she enjoyed coming very much. I would like also to say how very enjoyable my association this year with the Society has been; thanks to the friendly way in which the Directors have looked after me. I feel that the Society is very much indebted to you for the great trouble that you take."

*Accounts.*—The Secretary reported that a Summary of the Accounts of the Melrose Show had that day been submitted to the Finance Committee. These Accounts showed a probable credit balance of about £120.

*List of Awards.*—A List of Awards at Melrose Show was laid on the table.

The Secretary reported that the Judges of New Implements had inspected the "Elderslie" Aquatic Weed Cutter at work on Craighall Dam, Neilston, on 23rd July, when it was decided to award a Silver Medal to the inventor, Mr A. A. Hagart Speirs of Elderslie.

*Herdsmen's Pavilion.*—A Report by the Organising Secretary, on the work for Herdsmen carried out by the Y.M.C.A. in the Herdsmen's Pavilion at the Show, was submitted. From this Report, it appeared that the Herdsmen greatly appreciated the provision made for their comfort and entertainment in the Pavilion. The Secretary was instructed to write to the Y.M.C.A., expressing the thanks of the Directors for the valuable services which they had rendered to the Herdsmen at the Show.

#### *Alloa Show, 1937.*

*Judges.*—The following were appointed a Selection Committee to draw up Panels of Judges for consideration at next Meeting: Major R. F. Brebner, Mr J. E. B. Cowper, Mr James Durno, Mr William I. Elliot, Mr W. P. Gilmour, Mr George Grant, Mr J. E. Kerr, Mr James M'Laren, Mr Alexander Murdoch, Mr John W. Prentice, Mr T. Mercer Sharp, Mr Thomas Templeton, with the Chairman, Treasurer, and Honorary Secretary, *ex officio*.

A request from the Suffolk Sheep Society, that two Judges be appointed for Suffolk Sheep, was submitted, but it was decided that the request could not be granted.

*Forage Committee.*—The following Committee was appointed to make arrangements for the supply of Forage, and report to the Board: Mr John W. Prentice (*Convener*), Mr Walter Aitkenhead, Mr Thomas Clark, Mr J. E. B. Cowper, Captain Thomas Elliot, Mr J. E. Kerr, Mr James M'Laren, Mr William M'Laren, Mr Thomas M'Lay, Mr William Meiklom, Mr James Paton, Mr T. Mercer Sharp, Major R. W. Sharpe.

*Show Contracts.*—It was remitted to the following Committee, with powers, to arrange the timber and other contracts in connection with the Showyard: Mr J. E. Kerr (*Convener*), Mr James Durno, Mr George Grant, Mr James R. Lumsden, Mr James M'Laren, Mr Alexander Murdoch, Mr Gavin Ralston, Mr John P. Sloigh, Mr Andrew Telfer, Mr F. W. Walker, Colonel Robert W. Walker.

*Showyard Arrangements.*—It was remitted to the following Special Committee to visit the Showyard and discuss with the Society's Officials the layout of the ground and the arrangement of the various buildings, &c., within the Showyard: Mr J. P. Ross-Taylor (*Convener*), Mr J. E. Kerr, Mr James M'Laren, Mr Alexander Murdoch, Mr James Paton, Mr John W. Prentice, Mr T. Mercer Sharp, Provost James P. Younger.

*Hotel Accommodation and Catering in Showyard.*—It was remitted to the Chairman of the Board, the Chairman of the Shows Committee, the Convener of the Local Committee, the Steward of Catering, and the Secretary, to make the necessary arrangements.

*Forestry Exhibition.*—It was agreed that space be granted to the Royal Scottish Forestry Society for an exhibition of Timber, and also a grant of £40 towards the expenses of the Exhibition.

*Special Prizes.*—A large number of Special Prizes were accepted, and votes of thanks accorded to the donors.

#### *Show of 1938.*

A Report of the Sites Committee was submitted and approved.

The Report stated that the Committee had visited Lockerbie and Dumfries on 13th and 14th July, and inspected prospective sites at these centres.

At Lookerbie, the site proposed consisted of two fields on the farm of Broomhouses. The Committee did not regard this site as suitable for the Show.

At Dumfries, the site proposed was at Rotchell Park, on ground belonging to Mr Andrew Johnston, where the Show was held in 1930. This site, as inspected by the Committee, consisted of two fields which formed part of the former site, extending to 17 acres and 12 acres respectively, together with another field to the west thereof, extending to 26 acres, making a total of 55 acres. The 12-acre field could be used as a car park, while the other two fields would give an extent of over 43 acres of Showyard. The ground was level, with a good surface, and the Town Council were prepared to lead water, gas, and electricity on to the ground.

The Committee decided to accept the offer of this ground, and the Secretary wrote accordingly to the Town Clerk of Dumfries on 21st July.

Later it transpired that Mr Johnston wished to offer, as an alternative site, in the event of his selling the field of 26 acres, the three fields which formed the actual site of the 1930 Show, of 17, 16, and 12 acres respectively, together with two fields on the opposite side of New Abbey Road, of 17 acres and 7 acres respectively, the latter two fields to be used as car parks.

The Committee agreed to the proposed alternatives, but stipulated that the Society should be informed definitely, not later than 1st November 1937, if the field referred to had been sold, so that they might be in a position to proceed with the Show planning and arrangements.

This decision was communicated to the Town Clerk on 4th August, and, on 27th August, a letter was received from the Town Clerk forwarding copy of a new Agreement entered into between Provost W. J. Kelly and Mr Andrew Johnston, which Agreement embodied the alternative proposals above referred to.

#### *Grass Sickness in Horses.*

The following Petition was submitted :—

TO THE CHAIRMAN AND DIRECTORS  
of the Highland and Agricultural Society of Scotland.

#### *Grass Sickness in Horses.*

We, the undersigned Members of the Society, desire to bring to your notice the very serious loss being sustained by farmers through the ravages of the disease known as "Grass Sickness" amongst horses.

The losses on different farms and in different areas are appalling, and the outbreaks are totally unaccountable. One farm may lose nearly all the horses on it one year, while the adjoining farms may not have a case—in subsequent years the farms which escaped may be the ones to have losses, and the others may entirely escape.

So serious is the extent of the losses that Insurance Companies are declining to insure the risk, and farmers are at their wits' end as to how to protect themselves against possible ruin.

We therefore respectfully suggest that the Society offer a prize of not less than 1000 guineas, open to anyone who can discover satisfactory means, either of preventing or curing this disease—the offer of the prize to be given suitable world-wide advertisement.

We cannot think of any way in which the Society can more usefully and practically serve the interests of agriculture than in making this effort to deal with this most serious scourge.

The Petition bore 1095 signatures, of which 698 were Members and 397 Non-Members of the Society.

Colonel F. J. Carruthers said that every member of the Board realised the great gravity of the position in regard to Grass Sickness. The Society recognised it a number of years ago when they spent nearly £2000 on research work in trying to find the cause of the disease. That research work was undertaken by Dr Tocher, but, unfortunately, did not lead to the discovery of a cure. They were all convinced that the only way to tackle the problem was by scientific research. It was only when they had discovered the cause of the disease that they were likely to find either a preventive or a cure.

The Animal Diseases Research Association had been working on this problem for the last two years, but they had been seriously handicapped by lack of sufficient laboratory accommodation, of sufficient accommodation for live stock for experimental purposes, and of funds to pay for the extra staff required. Up to the

present, results had been more or less negative. The Association had not yet been able to transmit the disease from a diseased animal to a healthy animal. Until they could do that they were a long way from discovering the cause and still further from discovering a remedy.

What really was wanted was more money for research work, and he suggested the Society should take the matter up with the Agricultural Research Council with a view to urging the Government to provide more financial support for the work being carried out by the Animal Diseases Research Association. He accordingly moved that the matter be remitted to the Finance Committee to take such steps as they considered desirable to induce the Government to treat the matter of Grass Sickness in Horses as an important national question.

The motion was seconded by Dr T. G. Nasmyth, Edinburgh, and, after some further discussion, was unanimously agreed to.

#### *Railway Rates for Live Stock.*

A letter was read from the Aberdeen-Angus Cattle Society requesting the Society, on behalf of Exhibitors, to support a representation they had made to the Railway Companies asking for a reduction in the rates for conveyance of Live Stock to and from Agricultural Shows.

It was agreed that the Society support the action of the Aberdeen-Angus Cattle Society in this matter, and the Secretary was instructed to write to the Railway Companies accordingly.

#### *Export of Pedigree Stock to New Zealand.*

A letter was read from the Aberdeen-Angus Cattle Society drawing attention to the grievance that existed in that New Zealand continued to place what practically amounted to an embargo on the export of Pedigree Stock from this country, and requesting the Society to co-operate in making further representations to the appropriate authorities with a view to having the embargo removed.

It was agreed to support the action of the Aberdeen-Angus Cattle Society in this matter.

#### *Empire Exhibition, Scotland, 1938.*

An Appeal was submitted from the Scottish Development Council asking the Society to guarantee a named amount in connection with the Empire Exhibition to be held in Glasgow in 1938. As doubts were expressed as to whether the Society, in virtue of its Constitution, could competently enter into such an obligation, it was decided to obtain the views of the Society's Law Agents on the point, these to be submitted to the next Meeting on 2nd December.

#### *Live Stock Industry.*

The Chairman reported as to further proceedings of the Scottish Joint Committee. Meetings of the Special Committee, appointed by the Joint Committee, were held on 12th and 26th August to discuss a scheme submitted by the Cattle Committee. Later an invitation was received from the Cattle Committee to meet them in London. As similar invitations were sent to the three bodies concerned, apart from the Highland Society, the question arose as to whether the representation should be from the Joint Committee or from the individual bodies. The Cattle Committee made it clear that they could not receive representatives both from the individual bodies and from the Joint Committee. The National Farmers' Union insisted on individual representation, so that no representation could be sent from the Joint Committee. As the Highland Society received no individual invitation, it followed that it could have no representative at the Meeting with the Cattle Committee.

The Chairman further said he had no doubt that, had the Highland Society been particularly anxious to be represented, it could have been arranged, but he thought the Joint Committee had discharged the duty for which it was appointed. While it was unfortunate that the Joint Committee had to break up, he thought it had done a great deal of good. When they went to London they impressed upon the Authorities that quality must be recognised, and he was confident that quality now would be recognised. He thought that that was

due, in large measure, to the pressure brought by the influential body from Scotland.

The Chairman concluded by expressing the thanks of the Directors to Mr Yardley for his services in connection with the work of the Committee.

*Railway Freight Rebates Fund.*

A Minute of Special Meeting of Finance Committee, dated 13th October, was submitted and approved.

The Minute stated that the Committee had taken into consideration a letter from the Department of Agriculture, dated 2nd October, with regard to the Railway Freight Rebates Fund. The letter referred at length to the recent decision of the House of Lords which materially affected the fund, so that it was probable only one-third of the amount available for rebates in the past would be available in the future. The question for consideration was whether that amount should in future be spread over the same selected traffics—viz., Fertilisers, Feeding-Stuffs, Potatoes, Milk, and Live Stock—or whether the traffics to receive benefit should be restricted to two or three of these which would thus receive more substantial rebates. The Committee decided, without arriving at any definite decision on the matter, to appoint the following to attend a Conference with the Department of Agriculture on the subject, on the afternoon of the same day: Mr Robert Macmillan, Colonel F. J. Carruthers, Mr Alexander Murdoch, Mr James R. Lumsden, and Mr John E. B. Cowper.

The Secretary stated that these gentlemen attended the Conference referred to, at which were also present representatives of the Scottish Chamber of Agriculture and the National Farmers' Union of Scotland. After discussion, it was decided that the three Agricultural bodies should hold a Joint Meeting, with a view to arriving at agreement on the subject, and should thereafter have a further Meeting with the Department.

A Joint Meeting of representatives of the three Agricultural bodies was held at the Offices of the National Farmers' Union on 21st October. At that Meeting it was not found possible to arrive at general agreement. The representatives of the National Farmers' Union desired that the amount available for rebates in the future should be restricted to Live Stock, Milk, and Potatoes, while the representatives of the Scottish Chamber of Agriculture, and of the Highland Society, put forward the view that the same selected traffics as previously received benefit from the rebates should continue to receive the restricted benefit in future. Those traffics were Fertilisers, Feeding-Stuffs, Live Stock, Milk, and Potatoes. The various representatives attended a Conference with the Department of Agriculture in the afternoon of the same day, when the views of the respective bodies were communicated to the Department.

After a statement by Colonel Carruthers, the action taken by the Society's representatives was approved.

*Finance.*

A Minute of Meeting of Finance Committee, dated 13th October, was submitted and approved.

The Minute dealt with the following matter:—

*Advertising Propaganda for Home Meat.*—Letters had been submitted from Mr George Davidson, Secretary of the Cheviot Sheep Society, with respect to a proposed Advertising Propaganda for Home Meat. The Society was invited to appoint two representatives to a Joint Meeting, at which representatives of the Scottish Chamber of Agriculture and the National Farmers' Union of Scotland would also be present. As the matter was stated to be urgent, the Committee had nominated Mr J. P. Ross-Taylor and Mr John E. B. Cowper as the Society's representatives to attend the proposed Joint Meeting. The Secretary was, however, instructed to point out that the matter had not been considered by the Board of Directors, and that the representatives mentioned could attend only with a view to discussing the matter and obtaining information as to what was proposed to be done.

It was decided that Major R. F. Brebner, The Leuchold, Dalmeny House, Edinburgh, be also nominated as one of the Society's representatives to the proposed Joint Meeting.

## MEETING OF DIRECTORS 2ND DECEMBER 1936.

Mr J. P. Ross-TAYLOR, Mungoswalls, Duns, in the Chair.

*Present.—Ordinary Directors*—Mr John D. Allan; Major R. F. Brebner; Mr William Brown; Mr Thomas Clark; Lieut.-Colonel Garden Beauchamp Duff, D.S.O.; Mr William I. Elliot; Mr George Grant; Mr J. E. Kerr; Mr Alexander Murdoch; Dr T. G. Nasmyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr J. P. Ross-Taylor; Lord Rowallan; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr John P. Sleigh; Mr A. A. Hagart Speirs; Mr Thomas Templeton; Colonel R. W. Walker; Mr James Wither; Mr James Wyllie. *Extraordinary Directors*—Mr Walter A. Aitkenhead; Mr A. Y. Allan; Mr Ian M. Campbell; Mr John E. B. Cowper; Captain James Craig; Captain Thomas Elliot; Mr Alexander Forbes; Mr John Hewetson; Mr James M'Laren; Mr Thomas M'Lay; Mr Gavin Ralston; Mr Peter Robertson; Major S. Strang Steel; Mr T. G. Wilson. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont.

*Letters.*

The following letters were submitted :—

*Miss Elliot, Balnakiel, Galashiels.*—Expressing thanks for resolution of sympathy on the death of her father, the late Mr John Elliot.

*Major J. M. Outhbert, Edinburgh.*—Thanking the Directors for expression of sympathy on the death of his brother, the late Lieut.-Colonel T. W. Outhbert, C.M.G., D.S.O.

*Miss C. K. Fraser, Knockomie, Forres.*—Acknowledging resolution of regret and sympathy on the death of her father, the late Mr William Fraser.

*Alloa Show, 1937.*

A Report of the Shows Committee, dated 3rd November, which had been printed and circulated, was submitted, considered in detail, and approved.

A Minute of Meeting of Shows Committee, dated 2nd December, was submitted and approved.

The Minute dealt with the following matters—

*Grants to Horse Associations and Grants to Federations of S.W.R.I.*—It was agreed to remit to the following Sub-Committee to consider the Regulations relating to these grants, and to report—Mr J. E. Kerr (*Convener*), Mr Thomas Clark, Mr James Durno, Mr W. P. Gilmour, Mr Alexander Murdoch, Mr Charles W. Ralston, with the Chairman, Treasurer, and Honorary Secretary, *ex officio*.

*Bacon Pig Competition.*—On the recommendation of a Sub-Committee appointed on 3rd November, it was decided to recommend that the Competition for Bacon Pigs at the Annual Show be discontinued.

*Flower Show.*—It was recommended that in future there be no offer of Gold or Silver Medals for competition in connection with the Flower Show.

*Horse-Shoeing Competition.*—The Secretary reported that the Local Branch of the National Master Farriers' and Blacksmiths' Association had agreed to co-operate in the Horse-Shoeing Competition. The following were appointed a Committee of Management: *Directors*—Mr John E. B. Cowper, Mr Thomas M'Lay, Mr Peter Robertson; *Local Blacksmiths*—Mr William Thomson, 9 Menstrie Road, Tullibody; Mr Alexander Buchanan, Blacksmith, Alva; Mr Peter Christie, Coalnaughton, Tulliecultry; together with Mr B. McCall, 18 Clackmannan Road, Alloa, Secretary of the Local Association.

*British Women's Temperance Association.*—It was agreed to grant a free site for an unlicensed Refreshment Stand to the Alloa Branch of the B.W.T.A.

*Convener of Local Committee.*—On the motion of Mr J. E. Kerr of Harviestoun, it was unanimously agreed that Mr James R. Lumsden of Arden, Dumbartonshire, be appointed Convener of the Local Committee of Management.

*Special Prizes.*—A number of Special Prizes were accepted, and votes of thanks accorded to the donors.

*Eradication of Bracken and Land Drainage.*

The Committee appointed on 6th May to consider the scheme authorised by the Secretary of State for Scotland for assistance in the destruction of bracken

reported as follows: That in the case of both Bracken Eradication and Land Drainage, a Government grant of not less than one-third of the total cost will be required to enable Proprietors and Tenants to carry out the work. The 1936 Bracken Scheme was conditional on certain approved machines being used, a stipulation which put the scheme beyond the reach of many needful people, who could not, for financial reasons, avail themselves of the offer. The Committee recommended that the Secretary of State for Scotland be approached by the Society, and other interested bodies, with a request that a Government grant of one-third of the cost be given for manual cutting of bracken, either by contract or direct labour, in addition to the assistance previously offered to those who wished to acquire machines. It was also recommended that the Government be urged to increase the grant for Land Drainage from one-quarter to one-third of the total cost.

Mr Ian M. Campbell, Bal Blair, Invershin, in moving adoption of the Report, emphasised the need for providing work for the unemployed in the areas affected.

After Major S. Strang Steel of Philiphaugh, and Captain Thomas Elliot, Lauder, had spoken in support, the Report was adopted, and it was decided that the same Committee should co-operate with other bodies interested in bringing the matter before the Secretary of State for Scotland. In this connection, it was mentioned that a Conference was to be held in the North British Station Hotel, Edinburgh, at 3 o'clock on the afternoon of the following day.

#### *Scottish Meat Advertising Scheme.*

A Report was submitted by the Society's representatives (Mr John E. B. Cowper and Major R. F. Brebner) who attended a Joint Meeting held at the offices of the National Farmers' Union on 6th November. The Meeting was called by the Cheviot Sheep Society to consider a scheme for advertising Scottish Beef and Mutton, and representatives were present from the Highland and Agricultural Society, the Scottish Chamber of Agriculture, the National Farmers' Union of Scotland, the Cheviot Sheep Society, and the Blackface Sheep Breeders' Association.

The object of the Joint Meeting was to consider the desirability of launching an intensive campaign to advertise Scottish Beef and Mutton as against the imported article.

There was before the Meeting a Meat Research Report issued by Messrs Osborne, Peacock & Co., Ltd., a firm of Advertising Agents. The Report surveyed generally the whole field of beef and mutton consumption in Scotland, particularly as between the home and imported article, and there was appended to the report Tables of the comparative values of the two classes of meat. The Report went so far as to say that the home article was cheaper than the imported, when consideration was given to the nutritive value and the edible portion—after waste, &c., was eliminated. It was amongst the poorer classes that there was the greatest consumption of imported meat.

The investigation into nutritive value, &c., was made, amongst others, by the West of Scotland College of Domestic Science and Professors of Glasgow and Cambridge Universities.

Tentative figures were submitted by the Advertising Agents, giving the cost of a campaign to cover not only Scotland, but London and the larger towns in England, at a sum of approximately £20,000 per annum. The general idea was that the cost should be met by a levy on each head of cattle and sheep slaughtered in Scotland. From figures which were submitted, this levy would be about 6d. per bullock and 4d. per sheep. It was suggested that the Government should be asked to introduce a clause into the forthcoming Cattle Bill giving producers in Scotland powers to make and collect the necessary levy.

Major R. F. Brebner, in speaking to the Report, suggested that the Society's two representatives should continue to represent them on the joint body, without in the meantime definitely approving of the suggestion to ask the Government to introduce the suggested clause, and this was agreed to.

#### *Inspection of Growing Crops of Potatoes.*

The Secretary reported that a letter had been received from the Department of Agriculture, dated 12th November, inviting the Society to send representatives to a Conference to be held on 26th November to discuss the working of the Scheme for the Inspection of Growing Crops of Potatoes. After consultation with the Chairman of Directors, he had asked Mr John E. B. Cowper and Mr James Paton to represent the Society at the Conference.



Mr John E. B. Cowper gave a short report on the proceedings at the Conference. No definite decisions had been arrived at, and the Meeting was adjourned.

It was agreed to request Mr Cowper and Mr Paton to continue to represent the Society at any future Meetings.

#### *Damage by Rabbits.*

The Secretary reported that a letter had been received from the Department of Agriculture, dated 7th November, informing the Society that a Select Committee of the House of Lords was to be appointed to consider "whether any measures, and if so what, ought to be taken for better protection of agriculture and the land against the ravages of rabbits, and to what extent, if any, the prohibition of the use of Gin Traps would affect the attainment of the object aforesaid."

The letter inquired whether the Society desired to give evidence before the Committee.

A letter in similar terms, dated 16th November, was received from the Committee Office, House of Lords.

After consultation with the Chairman of Directors, a reply was sent to both letters to the effect that the other Agricultural bodies, which had been invited to give evidence, would be quite capable of supplying all the information which could be given by representatives of the Society. This reply was approved.

After some discussion, the Secretary was instructed to write to the Clerk of Committees, House of Lords, to the effect that the Directors were unanimously of the opinion that the abolition of Gin Traps should be opposed, at least until something equally efficacious was found to take their place. He was also instructed to mention that, as several of the Directors would be in London during the following week in connection with the Smithfield Show, if the Select Committee should desire to have evidence on this point, it could be arranged for one or more to appear before the Committee at such time as might be found convenient.

#### *Ross-shire Deer Control Association.*

A letter was submitted from the Secretary of the Ross-shire Deer Control Association, forwarding copy of a scheme for the prevention of damage by deer, and the control of surplus deer stocks in the County of Ross and Cromarty.

#### *Finance.*

A Minute of Meeting of Committee, dated 2nd December, was read and approved.

The Minute dealt with the following matters:—

*Grass Sickness in Horses.*—A letter was submitted from Dr J. Russell Greig, Director of the Animal Diseases Research Association, in which he stated that the Agricultural Research Council had sanctioned the appointment of one Senior and one Junior Research Worker, and also four additional Laboratory Attendants and an additional Shorthand Typist. Provision for these was to be made in the Estimates of the Association for the year 1937-38, so that it was hoped their services would be available by 1st April 1937. Dr Greig also gave particulars of the necessary extension of buildings which would be required for the work, as the Institute was at present overcrowded. These extensions for research work and accommodation for animals would cost approximately £9000, and an appeal was being made that this money be found from State sources.

A statement issued by the Agricultural Research Council, with reference to the work on Grass Sickness carried out by the Animal Diseases Research Association, was also submitted. In this the Council stated that they were satisfied that no possible clue to the cause and ultimate prevention of the disease had been neglected, that the investigation had been well conceived and ably pursued, and that every opportunity had been seized of seeking the advice of specialists who might assist in the unravelling of the cause of this baffling disease. While no cure for the disease had yet been discovered, hopeful advances in knowledge had been made, and the Council were convinced that the programme of research work now adopted by the A.D.R.A., including large-scale immunisation experiments, was wisely planned and should be vigorously pursued.

The Committee recommended that the Directors thank the Agricultural Research Council for their communication, and inquire if it would strengthen the appeal to the Treasury for the necessary funds if the Society were to write to the Secretary of State for Scotland on the subject.

*Empire Exhibition, Scotland, 1938.*—A letter was submitted from the Society's Law Agents, in which the view was expressed that it would not be contrary to the Constitution and objects of the Society to subscribe to the Guarantee Fund for the Exhibition, provided the Society was satisfied that support of the proposed Exhibition would tend to further the objects of the Society. In view of this, the Committee recommended that the Society agree to act as guarantors for a sum of £1000.

*Scottish Agricultural Organisation Society.*—It was recommended that the grant of £100 to the Scottish Agricultural Organisation Society be renewed for the year 1937.

*Retirement of Professor Stanfield.*—It was recommended that Professor Stanfield be granted an annual allowance of £150 as from 1st December, this sum to be in name of retiring allowance and as a retaining fee to secure his services in an advisory capacity.

It was further recommended that, in view of his long and valued service of thirty years with the Society, Professor Stanfield be elected an Honorary Member at the Anniversary General Meeting in January.

#### *Railway Freight Rebates Fund.*

Colonel F. J. Carruthers said that, in view of the probable early introduction of a Bill dealing with the subject, steps should be taken to bring before Members of Parliament the views of the Society with regard to agricultural traffics which should receive the benefit of rebates in future.

It was agreed to remit the matter to the Finance and Law Committee to take such action as they might consider desirable.

### MEETING OF DIRECTORS, 6TH JANUARY 1937.

Mr J. P. ROSS-TAYLOR, Mungoswells, Duns, in the Chair.

*Present.*—*Vice-President*—Provost J. P. Younger, Alloa. *Ordinary Directors*—Mr John D. Allan; Major R. F. Brebner; Mr Thomas Clark; Lieut.-Colonel Garden Beauchamp Duff, D.S.O.; Mr William I. Elliot; Mr George Grant; Mr J. E. Kerr; Mr James R. Lumsden; Mr William Montgomery; Dr T. G. Naamyth; Mr James Paton; Mr John W. Prentice; Mr Charles W. Ralston; Mr J. P. Ross-Taylor; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr A. A. Hagart Speirs; Mr Thomas Templeton; Mr Francis W. Walker; Colonel R. W. Walker; Mr James Withier; Mr James Wyllie. *Extraordinary Directors*—Mr Walter A. Aitkenhead; Mr A. Y. Allan; Mr Ian M. Campbell; Mr John E. B. Cowper; Captain James Craig; Mr James Durno; Captain Thomas Elliot; Mr Alexander Forbes; Mr W. P. Gilmour; Mr John Hewetson; Mr James M'Laren; Mr William M'Laren; Mr Thomas M'Lay; Mr Gavin Ralston; Mr Peter Robertson; Major S. Strang Steel; Mr T. G. Wilson. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont. *Chemist*—J. F. Tocher, D.Sc., F.I.C. *Auditor*—Mr George James Gregor, C.A.

#### *The late Mr James P. Brown, Dipple.*

Before proceeding with the business of the Meeting, the Chairman referred, with very deep regret, to the death on 15th December of a Member of the Board, Mr James P. Brown, Dipple, Fochabers. Mr Brown, he said, had been a Member of the Society for over forty years, and a Director since the year 1929. He was a well-known personality in the agricultural life of the North of Scotland, and was widely known as a breeder and judge of Clydesdale Horses and Shorthorn Cattle. He took a great interest in public work, especially in educational affairs, and was actively identified with many public bodies. He took a keen interest in the affairs of the Society, and served on several of its Standing Committees. For many years he rendered a valuable service to the Society by acting as a Steward of Gates at the Annual Show. In all these activities his kindly disposition and genial personality earned for him the regard and esteem of his colleagues.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to Mrs Brown and the family of the deceased.

*Letters.*

The following letters were submitted :—

*Professor R. Stanfield.*—Expressing thanks for the arrangements made in connection with his retirement from the post of Consulting Engineer, and also his appreciation of the honour which the Directors proposed to confer upon him by recommending him for election as an Honorary Member of the Society.

*Department of Agriculture for Scotland.*—Inviting representatives to attend resumed Meeting on 15th January with regard to the Scheme for the Inspection of Growing Crops of Potatoes.

*Ministry of Agriculture and Fisheries.*—From Mr W. Jackson Young, F.R.C.V.S., Superintending Inspector, forwarding copies of Orders recently issued with regard to control of Poultry Diseases.

*Loyal Address to His Majesty the King.*

A Loyal Address to His Majesty the King, on the occasion of his Accession to the Throne, which had been prepared for submission to the Anniversary General Meeting, was submitted, and the terms thereof approved. (The Address appears on page 9 of this volume.)

*Royal Patronage.*

The Secretary read the following Memorandum from the Keeper of the Privy Purse, dated 14th December :—

"The Keeper of the Privy Purse is commanded by the King to state that His Majesty is pleased to intimate to those Societies and Institutions which were recently granted Patronage by King Edward VIII., that they may continue to show the Sovereign as their Patron during the present reign, unless otherwise notified."

*Accession of His Majesty King George VI.*

The Secretary reported that the Society was represented at the Proclamation in Edinburgh, on 14th December, of King George VI.'s Accession to the Throne, by Mr John E. B. Cowper, Major R. F. Brobner, and the Secretary.

*Coronation of Their Majesties The King and Queen.*

A letter was read from the Under-Secretary of State for Scotland, inviting the Society to nominate one representative, to whom an invitation would be issued, to attend the Ceremony of the Coronation of their Majesties King George VI. and Queen Elizabeth in Westminster Abbey on 12th May 1937.

It was unanimously decided that Mr J. P. Ross-Taylor, Chairman of Directors, be nominated to represent the Society on that occasion.

*Alloa Show, 1937.*

*Stewards.*—The Principal Stewards of the various departments were appointed as follows : *Cattle*—Mr James Durno ; *Horses*—Mr George Grant ; *Sheep, Goats, and Pigs*—Mr James M'Laren ; *Poultry*—Mr James R. Lumsden ; *Catering, Bees, and Honey*—Mr John E. B. Cowper ; *Special Events*—Mr Alexander Murdoch ; *Grand Stands*—Major R. W. Sharpe ; *Forage*—Mr John W. Prentice ; *Gates*—Mr Ian M. Campbell ; *Implements*—Mr J. P. Ross-Taylor ; *Flower Show*—Mr A. A. Hagart Speirs.

*Veterinary Inspector.*—Mr George C. Inglis, M.R.C.V.S., Alloa, was appointed Veterinary Inspector for the Show, on the usual conditions.

*Rural Industries.*—It was agreed to delete the class for Basket Work and, in its place, to introduce a class for a specimen of Woodcraft (small article).

It was also agreed to appoint the following to act as Judges : Miss Bruce, Highland Home Industries, Edinburgh—Shetland Knitting, Tweeds, and Lace ; Mr Henry G. Paterson, Dryden Place, Edinburgh—Handicrafts ; Miss Angus, School of Art, Aberdeen—Embroidery ; *Reserve*—Miss A. C. M'Credie, Glasgow.

*Live Stock Judging Competition.*—Letters were submitted from the Agricultural Advisory Committee of the County of Fife and the Education Committee of the Perth and Kinross Joint County Council with regard to the age limits for competitors in the Stock Judging Competition.

It was decided to defer arriving at a decision until next Meeting, and that, in the meantime, the views of the Agricultural College Authorities be obtained with regard to the matter.

*Allotment.*—A letter was read from the Honorary Secretary of the Scottish National Union of Allotment Holders accepting the offer to allocate 400 square yards for a Poultry Exhibit.

*Bacon Pig Competition.*—A letter was submitted from the Honorary Secretary of the Scottish Bacon Pig Committee with reference to the Society's decision to cancel the Bacon Pig Competition for Alloa Show. The Committee expressed the wish that the Directors should receive a deputation on the subject, and it was agreed that the deputation be received on a date to be afterwards arranged.

*Special Prizes.*—A number of Special Prizes were intimated, and votes of thanks accorded to the donors.

#### *Colouring of Sheep.*

A Report on the Proceedings at the Conference with representatives of Sheep Breed Societies, held on 3rd December, was submitted.

The general result of the Conference was that the Breed Societies, with the exception of the Society of Border Leicester Sheep Breeders, were in favour of all colouring of sheep, other than that contained in non-bloom dips, being prohibited. The representatives of the Border Leicester Society desired that the colouring as at present practised should not be prohibited.

A general discussion followed, from which it appeared that the speakers were in favour of Rule 44 being amended so as to prohibit the use of all colouring matter.

It was eventually agreed to remit to the representatives of the Society who attended the Conference to draw up a suggested amendment of Rule 44, for consideration at next Meeting.

#### *Eradication of Bracken.*

A letter was submitted from the General Secretary of the National Farmers' Union of Scotland, forwarding copy of a Resolution unanimously adopted at a Joint Conference held on 3rd December. The Resolution stated "that the Government Scheme providing grants in aid of the eradication of bracken should be amended forthwith so as to provide—

- "(1) That the amount of the grant shall be equal to not less than one-third of the total cost of the work involved.
- "(2) That the grant shall in no way be restricted to the use of approved bracken cutting machines, but that it shall also apply when cutting is carried out by manual labour—either under contract or by direct labour."

At that Conference a deputation was appointed to wait upon the Secretary of State for Scotland, and this deputation was received by him on 24th December. In the Official Report of the Meeting, issued from the office of the Secretary of State, it was stated that "there were serious difficulties, administrative and otherwise, in the way of extending the grant facilities for bracken cutting to cover hand-cutting and in increasing the rate of grant. The supervision of such an extended scheme, for example, would not be easy; and would probably involve a heavy increase in the inspectorate of the Department of Agriculture for Scotland."

#### *Land Drainage.*

A letter was also submitted from the General Secretary of the National Farmers' Union of Scotland, forwarding copy of a Resolution anent Land Drainage, passed at the Joint Conference held on 3rd December. This Resolution stated that the Conference unanimously resolved "that the rate of the Government Grant under the Scheme for the assistance of Agricultural Drainage—field and hill drainage—should be raised from one-quarter to one-third of the cost of the work involved, and instructs that necessary steps be taken forthwith to press the Government, through the Secretary of State for Scotland, to give effect to these representations when framing the Scheme for the year 1937-38."

In the Official Report of the Meeting of the deputation with the Secretary of State for Scotland, above referred to, it was stated: "As regards drainage it had to be remembered that grants for this purpose were not available at all to farmers in England and Wales. Moreover, any increase in the present rate of grant, assuming that the total provision of money for the purpose remained

at a comparable level, would by increasing the number of applications for grants, increase the difficulty of selecting successful applicants and give rise to dissatisfaction among those whose applications would have to be refused."

It was added that the Secretary of State would, however, give serious consideration to the deputation's case as it had been presented to him.

#### *Damage by Deer.*

The letter from the General Secretary of the National Farmers' Union of Scotland also referred to the discussion which had taken place at the Joint Conference with regard to depredations by deer, and forwarded copy of a Resolution thereon, which had been submitted by the representatives of the Union.

Mr Ian M. Campbell, Bal Blair, Invershin, said he did not think there was a general feeling that deer should be placed in the same category as ground game. The deer question was a very difficult one, and would not be easily solved.

It was decided to leave the matter to Mr Campbell and Captain Thomas Elliot for further consideration, and to represent the Society at any future Meetings of the Joint Conference.

#### *Live-Stock Industry.*

Mr Ian M. Campbell, Bal Blair, Invershin, submitted the following Motion, which appeared under his name on the Agenda :—

"That realising the extreme gravity of the situation with regard to home produced beef and mutton, in view of completed and pending agreements with foreign and colonial governments, this Society agrees to call a Conference immediately of the interested agricultural bodies of Scotland, with the object of demanding from the Government adequate protection for home produced beef and mutton, for a definite fixed period of years or otherwise."

In speaking to the Motion, Mr Campbell said that in recent agreements with other countries, and in particular with the Argentine, it was generally recognised that British Agriculture had been more or less sacrificed for the sake of other vested interests, and the agreements had been framed largely as compensation for the exports from this country of heavier materials. Benefits afforded to certain sections of British Agriculture, by the pernicious system of subsidies, were totally uneconomic from the national standpoint, and little benefit had accrued to the Scottish farmer from these. Live Stock and Oats were more important than anything else in Scotland. He advocated as a remedy a whole-hearted return to the White Paper Policies of 1934 and 1935.

The Motion was seconded by Lieut.-Colonel Garden Beauchamp Duff, D.S.O., of Hatton.

After discussion, Mr Campbell agreed to withdraw his Motion in favour of a proposal that the whole matter be remitted for consideration to the Society's representatives on the Scottish Joint Committee on the Live-Stock Trade.

Mr Ian M. Campbell's name was added to the Committee in place of Mr Robert Macmillan.

#### *Scottish Meat Advertising Scheme.*

A letter was submitted from the General Secretary of the National Farmers' Union of Scotland, forwarding a Report of the Proceedings at the Joint Conference held on 8th November 1936, with regard to the proposed Scheme for the Advertising of Home Meat.

#### *Railway Rates for Live Stock.*

Replies were submitted from the London, Midland and Scottish Railway Company, and the London and North Eastern Railway Company, to the representation, agreed to by the Directors on 4th November, with regard to a reduction in the rates for conveyance of Live Stock to and from Agricultural Shows. These replies stated that the Railway Companies, in conference at the Railway Clearing House, had considered the matter and regretted that they could not see their way to effect any alteration in existing charges or methods of charging.

*Scottish Agricultural Organisation Society.*

On the Motion of the Treasurer, it was unanimously agreed to confirm the proposed grant of £100 to the Scottish Agricultural Organisation Society for the year 1937.

*Show of 1939.*

Mr John E. B. Cowper, Gogar House, Corstorphine, moved the following Resolution:—

“That, provided a suitable site is available, and satisfactory financial and other arrangements can be made, the Society's Show of 1939 be held in the Edinburgh Show Division.”

Dr T. G. Nasmyth, Edinburgh, seconded, and the Motion was unanimously agreed to.

*Finance.*

A Minute of Meeting of Finance Committee, dated 6th January, was submitted and approved.

The Minute dealt with the following matters:—

*Empire Exhibition (Scotland), 1938.*—A Form of Guarantee for the £1000 agreed upon at last Meeting was submitted, and it was recommended that this be signed, on behalf of the Society, by the Convener of the Finance Committee, the Earl of Home, K.T.

*Grass Sickness in Horses.*—It was recommended that a letter be sent to the Secretary of State for Scotland, pointing out the urgency of the problem and the necessity for funds being made available for the programme of research contemplated by the Animal Diseases Research Association. The letter should point out that the Society has for years been contributing substantially to the work of that Association. It was also suggested that reference be made to the recent Petition by a large number of Members of the Society, which Petition convinced the Society of the necessity of something being done without delay.

## MEETING OF DIRECTORS, 3RD FEBRUARY 1937.

Mr J. P. ROSS-TAYLOR, Mungoswells, Duns, in the Chair.

*Present.*—*Ordinary Directors*—Mr John D. Allan; Mr William Brown; Mr Thomas Clark; Mr William I. Elliot; Mr George Grant; Mr James R. Lumsden; Mr William Meiklem; Mr William Montgomery; Mr Alexander Murdoch; Mr James Paton; Mr John W. Prontice; Mr Charles W. Ralston; Mr J. P. Ross-Taylor; Lord Rowallan; The Hon. Walter T. H. Scott, Master of Polwarth; Mr T. Mercer Sharp; Major Robert W. Sharpe; Mr G. Bortram Shields; Mr John P. Sleight; Mr A. A. Hagart Speirs; Colonel R. W. Walker; Mr James Wither. *Extraordinary Directors*—Mr Walter Aitkenhead; Mr John E. B. Cowper; Mr James Durno; Captain Thomas Elliot; Mr Alexander Forbes; Mr W. P. Gilmour; Mr John Hewetson; Mr James M'Laren; Mr William M'Laren; Mr Gavin Ralston. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont.

*The late Dr T. G. Nasmyth, Edinburgh.*

Before proceeding with the business of the Meeting, the Chairman referred, with very deep regret, to the death, since last Meeting, of Dr T. G. Nasmyth, Edinburgh.

Dr Nasmyth, he said, was well known for many years in the public life of Fife and Edinburgh. He occupied, with distinction, for twenty years, the position of Medical Officer of Health for the Counties of Fife, Kinross, and Clackmannan. On retiring to Edinburgh, he took a very active part in public affairs. He was a member of Edinburgh Town Council and a Magistrate of the City, and served on the Board of many public bodies and Institutions.

As a Member of the Highland Society for nearly forty years, and latterly as a Director, he took a keen and practical interest in its affairs. His interests

naturally tended towards health matters in relation to Live Stock, and he represented the Society for many years on the Board of Governors of the Royal (Dick) Veterinary College. He was also deeply interested in the work of the Animal Diseases Research Association. Of an attractive personality, his business acumen and conscientious devotion to his many duties rendered him respected and esteemed by all with whom he was associated.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to Mrs Nasmyth and the family of the deceased.

### *Loyal Address to His Majesty the King.*

The following letter from H.M. Secretary of State for Scotland was read :—

SCOTTISH OFFICE,  
WHITEHALL, S.W.  
19th January 1937.

SIR,

I have had the honour to lay before The King the Loyal Address of the Highland and Agricultural Society of Scotland on the occasion of His Majesty's Accession to the Throne, and I have been commanded by The King to convey to you His Majesty's deep appreciation of the sentiments of loyalty and devotion to which it gives expression.

I am, Sir, Your obedient Servant,

WALTER E. ELLIOT.

The Secretary,  
Highland and Agricultural Society of Scotland,  
8 Eglinton Crescent,  
Edinburgh 12.

### *Letters.*

The following letters were submitted :—

*Mrs Brown, Dipple.*—Conveying thanks for resolution of sympathy on the death of her husband, the late Mr James P. Brown.

*Border District Union, B.W.T.A.*—Forwarding cheque for £25, which had been handed to the Royal Scottish Agricultural Benevolent Institution.

### *Vacancy on Board.*

It was remitted to the Ordinary Directors in the Inverness Show Division to bring forward the name of a Director to fill the vacancy caused by the death of the late Mr James P. Brown, Dipple, Fochabers.

### *Royal (Dick) Veterinary College.*

It was decided to appoint Mr John E. B. Cowper, Gogar House, Corstorphine, as the Society's representative on the Board of Governors of the Royal (Dick) Veterinary College, in place of the late Dr T. G. Nasmyth.

### *Science.*

A Minute of Meeting, dated 3rd February, was submitted and approved.

The Minute dealt with the following matters :—

*Schedule of Unit Values.*—The Schedule of Unit Prices of Manures and Feeding-Subs for the current year had been revised, and it was recommended that it be printed and issued as usual.

With regard to the prices of feeding-stuffs, a letter was submitted from Messrs James Gray & Company, Stirling, requesting the Society to discontinue publishing prices of feeding-stuffs in June.

After careful consideration it was decided that this request could not be complied with. The Committee would, therefore, meet again in June to draw up a list of prices of feeding-stuffs as at that date. The representatives of the various firms present signified their willingness to meet the Committee again in June.

*Values of Unexhausted Manures and Feeding-Stuffs.*—It was recommended that the Table of Values of Unexhausted Manures and Feeding-Stuffs be reissued, and that it be remitted to Dr Tocher, Consulting Chemist, to revise it in terms of the new unit values.

*Alloa Show, 1937.*

*Assistant Stewards.*—Assistant Stewards of the various departments were appointed as follows: *Cattle*—Mr J. E. Kerr; *Horses*—Mr John P. Sleigh; *Sheep, Goats, and Pigs*—Mr John Hewetson; *Forage*—Mr T. Mercer Sharp; *Grand Stands*—The Master of Polwarth; *Gates*—Mr James Wither and Mr Alexander Forbes; *Implements*—Mr James Paton.

*Timber Contract.*—A Minute of Meeting of Show Contracts Committee, dated 6th January, was read and approved.

The Minute recommended the acceptance of a tender by Messrs Muirhead & Sons, Ltd., Grangemouth Sawmills, Grangemouth, for the hire of the timber for Alloa Show.

*Forage.*—A Minute of Meeting of Forage Committee, dated 3rd February, was read and approved.

The Minute stated that only one tender had been received, and the Committee recommended the acceptance of the offer by the Forage Supply Co., Ltd., Springfield Mills, Leith, to supply forage for the Show.

*Show Stands and Rents.*—A Minute of Meeting of Special Committee on Show Stands and Rents, dated 2nd February, was submitted and approved.

The Minute stated that the Committee had met on two occasions, and had revised the classification of space and shodding at the Show, and also the rates to be paid therefor. A list of the new rates was embodied in the Minute. The Committee pointed out that the increases recommended were found to be necessary on account of the increased cost of timber and canvas.

*Committee on Colouring of Sheep.*—A Minute of Meeting of Committee on Colouring of Sheep was submitted and approved.

The Minute stated that, in accordance with the remit from the Board at last Meeting, the members who represented the Society at the Conference with Breed Societies had considered the wording of Rule 44, and recommended that it be altered so as to read as follows:—

“ 44. The Steward of Sheep, who can call in assistance if so desired by him, shall have full power to disqualify any pen of Sheep which he considers coloured, or when the fleece, face, or legs have been dealt with by the use of substances other than ordinary dips free of added colouring matter.”

*Times of Judging and Parades.*—A Minute of Meeting of Stewards, dated 2nd February, was read and approved.

The Minute stated that the Committee had considered and fixed the times of Judging of Stock and other sections, and the times of Parades.

*Live Stock Judging Competition.*—Letters received from the Agricultural Colleges, in reply to a request for their views regarding the age limits for Competitors, were submitted. These were in general agreement that the maximum age should be twenty-three, although different views were expressed as to the minimum age.

It was decided that, at Alloa Show, the Competition be open to all persons eighteen years of age and under twenty-three years of age.

*Proof of Prize List.*—A proof of the Prize List and Regulations was submitted and approved for publication.

*New Implements.*—The following were appointed Judges of New Implements: Mr J. P. Ross-Taylor, Mungoswells, Duns; Mr James Paton, Kirkness, Glencraig; and Mr John E. B. Cowper, Gogar House, Corstorphine.

*College Stand.*—On a request by the Edinburgh & East of Scotland College of Agriculture, it was agreed that the Society, in addition to granting a free Stand to the College, should bear the cost of erection of the necessary tables and shelving.

*Special Prizes.*—A number of Special Prizes were intimated, and a vote of thanks accorded to the donors.

*Show of 1939.*

It was decided that the following be appointed a Committee to visit and inspect available sites for the Show of 1939, and report: Mr John E. B. Cowper, Mr James Durno, Mr George Grant, Mr James M'Laren, Mr Alexander Murdoch, with the Chairman, Treasurer, and Honorary Secretary *ex officio*.



*Inspection of Growing Crops of Potatoes.*

A report was submitted by Mr John E. B. Cowper regarding a Meeting convened by the Department of Agriculture on 15th January, at which he attended as representing the Society. The meeting consisted of representatives of potato growers, and the object was to discuss the changes, if any, to be made for the ensuing season upon the Scheme for the Inspection and Certification of Growing Crops of Potatoes. The main outcome of the meeting was that it was decided that the standard for stock seed potatoes should remain as at present, and should not be relaxed in any way.

Mr Cowper was thanked for his report.

*Healthy Stocks of Potatoes.*

Mr Cowper also reported that he had attended a Meeting, convened by the Department of Agriculture on 14th January, as the Society's representative on a Committee set up to consider a proposed scheme for raising and disposing of pure healthy stocks of potato plants. A Draft Constitution of a Scottish Seed Growers' Association, prepared by a Sub-Committee, was submitted and considered at the Meeting. Further consideration was deferred until it could be known whether a Government grant could be secured to help in financing the scheme.

*Eradication of Bracken.*

A letter was submitted from the General Secretary of the National Farmers' Union of Scotland, forwarding copy of a letter from the Secretary of State for Scotland with regard to recent representations made to him that the present scheme for the eradication of bracken should provide that grants should be equal to not less than one-third of the cost of the work, and that they should apply to hand-cutting. In the Secretary of State's letter, the following passage occurred :—

"With regard to bracken, I am desired to say that the Secretary of State is well aware that the abnormal spread of the weed in recent years has been a cause of anxiety and loss to sheep farmers. It was for this reason that, a year ago, some assistance was offered with the object of endeavouring to promote the development of cheaper and speedier ways of eradicating the weed. The purpose of the present scheme includes, therefore, the encouragement of invention and development; and a Committee of experts will continue to investigate and experiment with new machinery and improved methods.

It should be noted that it was never the intention that the scheme should later be replaced by one providing for payments of grants, on the basis of a percentage of cost of work, to all or most of the farmers who applied for them. The cutting, or better still, the methodical destruction of bracken has always been a cardinal feature of the maintenance programme of hill farms. In any event, with regard to hand-cutting, there would be considerable financial as well as administrative objections to a system of grants; no financial provision within practicable limits could serve to satisfy more than a small proportion of the applications.

After full consideration the Secretary of State regrets, therefore, that in all the circumstances, he cannot introduce a scheme for the cutting of bracken by hand or increase the financial inducements of the present scheme."

*Land Drainage.*

The letter from the Secretary of State, above referred to, also contained the following passage with respect to the representation that the grant for Agricultural Drainage should be increased from 25 per cent to 33½ per cent of the cost of the work :—

"With regard to the present scheme for assisting agricultural drainage, the associations represent that the rate of the grant should be raised from 25 per cent to 33½ per cent of the cost of approved work in order that farmers may be enabled to take full advantage of the scheme. It should be noted, however, that, unless additional assistance were available from the Treasury, an increase in the rate of grant would involve a proportionate limitation in

the number of those qualifying for it. This, in Mr Elliot's view, would be most unfortunate, since it seems to him to be of prime importance that so far as possible the applications of all those who are prepared to take advantage of the assistance offered should be met. This object in point of fact is substantially achieved within the limits of the £9000 at present available.

Mr Elliot fears that it will not be possible to increase the total provision for this scheme, especially as this particular form of State assistance is not available to agriculturists in England and Wales, and that in these circumstances he cannot hold out any prospect of a revision of the rate of grant."

#### *Grass Sickness in Horses.*

The following letter, which had been forwarded to the Secretary of State for Scotland on 21st January, was read:—

8 EGLINTON CRESCENT,  
EDINBURGH,  
21st January 1937.

The Right Hon. Walter E. Elliot, P.C., M.P.,  
H.M. Secretary of State for Scotland,  
Scottish Office,  
Whitehall,  
London, S.W.1.

SIR,

#### *Grass Sickness in Horses.*

On 4th November there was submitted to the Directors of this Society a Petition, bearing over 1000 signatures, requesting the Society to offer a prize of not less than One Thousand Guineas to anyone who could discover a satisfactory means either of preventing or curing the disease known as 'Grass Sickness' in horses.

The Petition pointed out that the losses sustained by farmers through the ravages of the disease were appalling, and the outbreaks were totally unaccountable. So serious had the losses become that insurance companies were declining to insure the risk, and farmers were at their wits' end to know how to protect themselves against possible ruin.

While realising the great gravity of the position in regard to Grass Sickness, the Directors were of opinion that the offering of a prize was not an appropriate method of procedure, or one likely to lead to a satisfactory result. They were convinced that a solution of the problem could be reached only by properly directed systematic research along scientific lines.

Such research, they believe, is being conducted by the Animal Diseases Research Association, Moredun Institute, Gilmerton, Midlothian. With regard to the work at this Institute, the Agricultural Research Council, in a recent Memorandum, stated that they were satisfied that no possible clue to the cause and ultimate prevention of the disease had been neglected, and that the investigations had been well conceived and ably pursued. While no cure for the disease had been discovered, hopeful advances in knowledge had been made, and the Council were convinced that the programme of research adopted, including large-scale immunisation experiments, was wisely planned, and should be vigorously pursued.

The Association has made application for the appointment of two additional research workers, four additional laboratory attendants, and a shorthand typist, and it is understood this application has received the approval of the Agricultural Research Council. The amounts involved will be included in the Association's estimates for the year 1937-38, so that, if approved by the Treasury, the services of these workers will be available as from 1st April next. There is, however, the further question of additional accommodation for workers and animals, without which the work cannot effectively be carried on.

The Directors of this Society are extremely anxious that this investigation, which they regard as being of national importance, should not be held up through lack of funds. As evidence of their interest, it may be mentioned that, in the years 1917 to 1924, the Society spent about £2500 on an investigation into the disease, which was conducted by Dr J. F. Tochor, in collaboration with other workers. In 1921 the Society gave a grant of £1000 to the Animal Diseases Research Association, and in 1930-31 a further grant of £660 to equip a Bio-Chemical Department. It has also, since 1926, given an annual contribution of £200 to the Association. The total amount contributed to date is £3760. These contributions were, of course, towards the cost of the whole work of the Association, and not alone for the Grass Sickness investigation.

In view of the foregoing facts, the Directors of this Society feel justified in approaching you, as Secretary of State for Scotland, with a request that you do everything in your power to urge upon the Government the pressing claims of Scotland to have this disease regarded as a grave national question—especially as it is now spreading throughout the North and Midlands of England. If this is done, it is hoped that funds will immediately be made available by the Treasury for the purpose of enabling the investigation undertaken by the Animal Diseases Research Association to proceed expeditiously and effectively.

I am, Sir, your obedient Servant,

(Signed) JOHN STIRTON.

#### *Maintenance of Hedges.*

A letter was submitted, dated 23rd January, from Sir John H. Milne Home, Irvine House, Canonbie, with regard to the maintenance of hedges.

After referring to the deterioration of hedges taking place throughout South and Central Scotland, he suggested that the Society might consider introducing Competitions for the encouragement of good hedge management, and offer prizes to Hedgers and Farm Workers for the best renovated hedges.

It was agreed that the matter be remitted to the following Special Committee for consideration and report: Mr James R. Lumsden, The Master of Polwarth, Mr Charles W. Ralston, Major S. Strang Steel, with the Chairman, Treasurer, and Honorary Secretary *ex officio*.

#### *Importation of Pedigree Animals Act, 1925.*

The Secretary reported the receipt of a letter, dated 9th January, from the Ministry of Agriculture and Fisheries, with regard to a proposed importation of three Dorset Horn Lambs from Australia. These Ram Lambs were from No. 4 Flock (Dorset Horn Section) in the Flock Book for British Breeds of Sheep in Australia. In accordance with the terms of the above-mentioned Act, the Society was asked to give its views as to whether the Flock Book in which these animals were registered should be recognised.

As the matter was urgent, he had consulted with the Chairman of Directors, and had written to the Ministry, on behalf of the Directors, stating that they were of opinion that the Flock Book mentioned should be recognised for the purposes of the Importation of Pedigree Animals Act.

The Directors approved of the action taken.

#### *Finance.*

A Minute of Meeting of Finance Committee, dated 3rd February, was submitted and approved.

The Minute dealt with the following matters:—

*Royal (Dick) Veterinary College.*—It was recommended that a grant of £500 be given to the Royal (Dick) Veterinary College towards the cost of extension of the buildings of the College.

*Eaglesham Farmers' Society.*—It was recommended that a grant of £15 be given to the Eaglesham Farmers' Society towards the expenses of their Centenary Show to be held this year.

*Grass Sickness in Horses.*—An application was submitted from the County Clerk of Banff for a sum of from £300 to £400 to defray the cost of employing two recently qualified Veterinary Surgeons to supervise the treatment of 1000 horses in Banffshire with a calcium kaolin preparation recommended by the Veterinary Officer for Banffshire. The Committee, after careful consideration, did not see their way to recommend that such a grant be given. It was pointed out that Grass Sickness investigation was being actively pursued by the Animal Diseases Research Association, and as that body, it was understood, had sufficient funds placed at their disposal, it was decided to suggest that the request for assistance be referred to the Animal Diseases Research Association.

*Chief Clerk.*—A letter was submitted from Mr J. G. Yardley, Chief Clerk, intimating his resignation in view of his appointment as Secretary of the Bath and West and Southern Counties Society. It was recommended that the post be advertised, and that it be remitted to the following Sub-Committee to consider applications when received, and draw up a short list for interview by the Finance Committee: The Earl of Home, K.T. (*Convener*), Mr J. P. Ross-Taylor, Colonel F. J. Carruthers, Mr Alexander Murdoch, Mr William C. Hunter, Mr James Durno, Mr James Paton.

*Regulations for Appointment of Judges.*

It was decided that the Regulation requiring that a Judge accepting appointment at the Highland Show, "shall not, prior to that Show in the same year, act as Judge of the same class of Stock at any other Scottish Open Show, or Show open to one or more Counties," shall not apply to a person acting as Judge at the Spring Bull Sales held at Perth, Aberdeen, and Inverness.

MEETING OF DIRECTORS, 3RD MARCH 1937.

Mr J. P. ROSS-TAYLOR, Mungoswells, Duns, in the Chair.

*Present.—Ordinary Directors*—Mr John D. Allan; Major R. F. Brebner; Mr William I. Elliot; Mr George Grant; Mr J. E. Kerr; Mr William Montgomery; Mr Alexander Murdoch; Mr John W. Prentice; Mr J. P. Ross-Taylor; Hon. Walter T. H. Scott, Master of Polwarth; Major Robert W. Sharpe; Mr Francis W. Walker; Mr James Wither. *Extraordinary Directors*—Mr Ian M. Campbell; Mr John E. B. Cowper; Mr James Durno; Mr Alexander Forbes; Mr W. P. Gilmour; Mr John Hewetson; Mr James M'Laren; Major S. Strang Steel; Mr T. G. Wilson. *Treasurer*—The Earl of Home, K.T. *Honorary Secretary*—Colonel F. J. Carruthers of Dormont.

*The late Mr Thomas Elder of Stevenson.*

Before proceeding with the business of the Meeting, the Chairman referred, with very deep regret, to the death of a former member of the Board, Mr Thomas Elder of Stevenson, Haddington, whose connection with the Society as a Member dated back to 1890, and who had served as a Director for a period of ten years.

Mr Elder, he said, was widely known and highly respected in farming circles in the Lothians and throughout Scotland. On account of his sound practical knowledge of agriculture, his advice on farming matters was frequently sought. He devoted much time to the public service, and acted on many public bodies, in all of which he took a leading part. He took a special interest in education, and was long and prominently identified with the work of the Edinburgh and East of Scotland College of Agriculture.

While possessed of a keen critical faculty, his criticisms were invariably softened by a kindly humour, and his genial personality and good-fellowship made his presence welcome at all meetings with his colleagues.

A Minute of regret and sympathy was submitted and adopted, the Members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

*H.R.H. The Duke of Gloucester as President.*

The Secretary reported that, in accordance with instructions received at last Meeting, he had written to his Royal Highness The Duke of Gloucester requesting permission to put forward his name to the General Meeting on 2nd June for election as President of the Society for the year 1938.

A letter was read from Major Ronald Stanyforth, Comptroller, stating that it would give His Royal Highness great pleasure to be elected President of the Highland and Agricultural Society of Scotland for the year 1938.

The Chairman expressed the gratification this intimation gave the members of the Board, and said he was sure the news would be welcome to all members of the Society.

*Letters.*

The following letters were submitted :—

*Mrs Nasmyth, Edinburgh.*—Expressing thanks for resolution of sympathy on the death of her husband, the late Dr T. G. Nasmyth.

*Royal (Dick) Veterinary College.*—Conveying the sincere thanks of the Extension Fund Committee for the proposed grant of £500 to the Building Extension Fund.

*Eaglesham Farmers' Society.*—Expressing thanks for grant of £15 to the funds of their Centenary Show.

*Suffolk Sheep Society.*—Acknowledging intimation of new Rule regarding colouring of Sheep, and stating that this would give great satisfaction to all their Members.

*Fourth International Grassland Congress, 1937.*

It was decided to appoint Mr James Wither, Awhirk, Stranraer, to represent the Society at the Fourth International Grassland Congress to be held in July next.

*Dr J. F. Tocher, Consulting Chemist.*

On the motion of the Chairman, it was unanimously decided to send a telegram of congratulations to Dr J. F. Tocher on his being offered the Degree of LL.D. by the University of Aberdeen, and, at the same time, expressing best wishes for his speedy return to good health.

*Vacancy on Board.*

On behalf of the Ordinary Directors in the Inverness Show Division, Mr Francis W. Walker of Leys, Inverness, moved that Captain Ian S. Robertson, M.C., Linkwood, Elgin, be nominated at the General Meeting in June as an Ordinary Director to fill the vacancy caused by the death of Mr James P. Brown, Dipple, Fochabers. This was unanimously agreed to.

*Alloa Show, 1937.*

*Suffolk Horses.*—On a request from the Suffolk Horse Society, it was decided to accept entries of four or six Suffolk Horses for exhibition only.

*Free Stands.*—A list of applications for free stands was submitted.

The Secretary stated that the list had been carefully considered by the Finance Committee, who recommended the continuation of those grants, with the following exceptions :—

*Department of Agriculture for Scotland.*—That it be pointed out to the Department that, on account of the limited space in the Main Square and the increased demand for such space, it would not be possible to grant a free site in the Main Square in future, but that free space would be allocated in some other suitable position. If the Department were desirous of retaining a position in the Main Square, then the appropriate rent for the space would require to be paid.

*Forestry Commission.*—That the grant of 50 ft. of shedding in Section 4 be discontinued.

*Scottish Savings Committee.*—That the grant of 10 ft. in Section 4 be discontinued.

*Messrs John Menzies & Co., Ltd., Advertising Agents.*—That the grant of 30 ft. in Section 5 be discontinued.

*British Broadcasting Corporation.*—20 ft. in Section 4 at a reduced figure of £5.

*Scottish Country Industries Development Trust.*—40 ft. or 50 ft. in Section 3 at half rates.

The recommendations of the Finance Committee were unanimously adopted.

*Gymnastic Display.*—A suggestion for a display by a team from the A. & S. Highlanders was remitted to the Stewards for consideration and report.

*Royal (Dick) Veterinary College.*

On the motion of the Treasurer, it was unanimously agreed to confirm the proposed grant of £500 towards the Building Extension Fund of the College.

*Grass Sickness in Horses.*

The following letter from the Department of Agriculture for Scotland was submitted :—

DEPARTMENT OF AGRICULTURE FOR SCOTLAND,  
YORK BUILDINGS, QUEEN STREET,  
EDINBURGH 2,

3rd February 1937.

SIR,

*Grass Sickness in Horses.*

I am desired by the Secretary of State to refer to your letter of the 21st ultimo, regarding the prevalence of grass sickness in horses, and the investigation into the disease that is being made by the Animal Diseases Research Association.

The Department are alive to the gravity of the problem presented by this disease, and every proposal that might assist in the early discovery of the means of prevention or cure of grass sickness in horses will receive their most careful and sympathetic consideration. As stated in your letter, the Animal Diseases Research Association have made application for the appointment of additional research workers and the provision of increased accommodation at the Moredun Institute, in order that they may intensify and extend their investigation of the disease with the least possible delay. This application has been considered by the Agricultural Research Council and by the Department, who hope to be in a position to communicate a decision on the matter at an early date.

I am to add that the Department fully appreciate the interest taken by the Society in the investigation into this disease and are aware that they have contributed towards the cost of the investigation and towards the maintenance of the Animal Diseases Research Association over a considerable number of years. I am desired to express the hope that the Society may continue to give generous financial support to this work.

I am, Sir, your obedient Servant,

CHAS. WEATHERILL.

The Secretary,  
Highland and Agricultural Society of Scotland,  
8 Eglinton Crescent,  
Edinburgh.

*Finance.*

A Minute of Meeting of Finance Committee, dated 3rd March, was submitted and approved.

The Minute recommended that Mr Thomas W. Russell, Law Agent, 6 Glamis Road, Kirriemuir, be appointed Chief Clerk and Cashier, in succession to Mr J. G. Yardley, at a salary of £350 per annum. It was expected that Mr Russell would commence duty about the end of the current month.

*Damage by Deer.*

Further consideration was given to a letter from the National Farmers' Union of Scotland, dated 4th December, enclosing copy of a Resolution submitted by the Representatives of that Union to the Joint Conference held on 3rd December with reference to damage by deer.

After careful consideration, it was decided that the Secretary be instructed to reply that the Directors agreed that the damage done by deer in certain districts in Scotland was very great, and that action of some kind was necessary to deal with those depredations. They could not see their way, however, to approve of the recommendations contained in the resolution referred to, as they considered that these proposals were impracticable. They welcomed the voluntary efforts which were being made by landowners and others in certain districts—e.g., the Ross-shire Deer Control Association, and hoped that this voluntary effort might be extended by the formation of similar organisations in other areas.

## PROCEEDINGS AT GENERAL MEETINGS.

GENERAL MEETING, 3RD JUNE 1936.

THE EARL OF HOME, K.T., Treasurer of the Society, in the Chair.

### *New Members.*

Two hundred and eight candidates were balloted for and admitted members of the Society.

### *His Majesty The King as Patron of the Society.*

The Chairman read the following letter addressed to the President of the Society by Lord Wigram :—

PRIVY PURSE OFFICE,  
BUCKINGHAM PALACE, S.W.,  
5th May 1936.

DEAR SIR,

I am commanded by The King to inform you that His Majesty has been graciously pleased to grant his Patronage to the Highland & Agricultural Society of Scotland.—Yours truly,

WIGRAM,  
*Keeper of the Privy Purse.*

The President,  
Highland and Agricultural Society of Scotland,  
Edinburgh 12.

### *Election of Office-Bearers.*

The following noblemen and gentlemen were elected office-bearers of the Society for the year 1936-37 :—

*President.*—The Earl of Mar and Kellie, K.T., Alloa Park, Alloa.

*Vice-Presidents.*—The Duke of Montrose, C.B., C.V.O., Buchanan Castle, Drymen; The Earl of Ancaster, Drummond Castle, Crieff; Sir Iain Colquhoun of Colquhoun and Luss, Bart., Rossdu, Luss; Provost James P. Younger, Alloa.

*Ordinary Directors, 1933.*—Mr John W. Prentice, Craigrie Farm, Clackmannan; Mr James Wyllie, Tinwald Downs, Dumfries; Dr T. G. Nasmyth, Canaan Lodge, 43 Canaan Lane, Edinburgh; Mr William Fraser, Knockomie, Forres; Mr Thomas Clark, Muirtons, Perth; Lord Rowallan, Rowallan, Kilmarnock; Mr George Grant of Glenfarclas, Blacksboat; The Hon. Walter T. H. Scott, Master of Polwarth, Harden, Hawick.

1934.—Mr Charles W. Ralston, Holmhill, Thornhill, Dumfriesshire; Major R. F. Brebner, The Leuchold, Dalmeny House, Edinburgh; Sir Hector D

Mackenzie of Gairloch, Bart., Conan House, Conan Bridge; Mr James Paton, Kirkness, Glencraig; Mr Alexander Murdoch, East Hallside, Cambuslang, Lanarkshire; Colonel Robert W. Walker, Culter Lodge, Milltimber, Aberdeenshire; Mr Thomas Templeton, Sandyknowe, Kelso; Mr James R. Lumsden of Arden, Dumbartonshire.

1935.—Mr G. Bortram Shields, 13 Moray Place, Edinburgh; Mr James P. Brown, Dipple, Fochabers; Mr William Meiklem, Bennoch Park, Kirkcaldy; Mr A. A. Hagart Speirs of Elderslie, Houston House, Renfrewshire; Mr John P. Sleigh of St John's Wells, Fyvie; Major Robert W. Sharpe of The Park, Earlstoun; Mr T. Mercer Sharp, Bardrill, Blackford; Mr James Wither, Awhirk, Stranraer.

1936.—Mr Francis W. Walker of Leys, Inverness; Mr John D. Allan, Culthill Implement Works, Murthly; Mr William Brown, Craigton, Bishopton; Lieut.-Colonel Garden Beauchamp Duff, D.S.O., Hutton Castle, Turriff; Mr J. P. Ross-Taylor, Mungoswalls, Duns; Mr J. E. Kerr of Harviestoun, Dollar; Mr William Montgomery, North Milton, Kirkcudbright; Mr William I. Elliot, Middletoun, Stow.

*Extraordinary Directors.*—Mr John E. B. Cowper, Gogar House, Corstorphine, Edinburgh; Mr James M'Laren, Cornton, Bridge of Allan; Mr John Hewatson, Baltersan, Newton-Stewart; Mr Ian M. Campbell, Bal Blair, Invershin; Mr Alexander Forbes, Rettie, Banff; Major S. Strang Steel of Philiphaugh, Selkirk; Mr James Durno, Crichtie, Inverurie; Mr W. P. Gilmour, Balmangan, Kirkcudbright; Captain Thomas Elliot, Thirlestane, Lauder; Mr Gavin Ralston, Glamis House, Glamis.

*Show District.*—Mr Walter A. Aitkenhead, Haining Valley, Linlithgow; Mr A. Y. Allan, Aitkenbar, Dumbarton; Captain James Craig, Innergeldie, Comrie; Mr William M'Laren, Inch, Kincardine-on-Forth; Mr Thomas M'Lay, Dunvegan, Causewayhead, Stirling; Mr Peter Robertson, Home Farm, Dalnair; Mr William M'Nair Snadden, The Coldoch, Blair Drummond, Stirling; Mr Duncan M. Stewart of Millhills, Crieff; Mr Andrew Telfer, The Whins, Alloa; Mr T. G. Wilson, Carbeth Home Farm, Balfour Station.

*Treasurer.*—The Earl of Home, K.T., The Hirsell, Coldstream.

*Honorary Secretary.*—Colonel F. J. Carruthers of Dormont, Lockerbie.

### *Special Grants.*

The Earl of Home, K.T., Treasurer of the Society, moved approval of the following Special Grants which were recommended by the Board of Directors:—

- (1) £200, for the current year, to the Animal Diseases Research Association.
- (2) £100, for the current year, to the Glasgow Veterinary College.
- (3) £50, for the current year, to the Highland Reel and Strathspey Society.
- (4) £25 to the Fourth International Grassland Congress.

Mr Alexander Murdoch, East Hallside, Cambuslang, seconded, and the Grants were approved.

### *Melrose Show, 1936.*

Major Robert W. Sharpe of The Park, Earlstoun, Convener of the Shows Committee, reported that he had been authorised by His Grace The Duke of Buccleuch, President of the Society, to announce that Her Royal Highness The Duchess of Gloucester hoped to visit the Show on Wednesday, 24th June, or on Thursday, 25th June, or perhaps both days. His Royal Highness The Duke of Gloucester would be unable to visit the Show on account of military duties. The visit of Her Royal Highness was particularly gratifying, when it was remembered that, on account of the death of His late Majesty, many public engagements had had to be declined. This visit, therefore, was to be regarded more as a personal affair, due to the Show being held in Her Royal Highness's own district, and among her own people and neighbours, and under the Presidency of her brother, His Grace The Duke of Buccleuch. This announcement, he said, would be acceptable to them all and specially to the members in the Border District, a very large number of whom he saw were present that day. He was sure it was the one thing they required to make the Show at Melrose a very great success.

He had to report that the arrangements for the Show on 23rd June and three following days were well advanced. The work on the Showyard had proceeded expeditiously, and was now sufficiently forward to give a fair indication of how the Showyard would appear when completed. The appearance should be entirely pleasing, as the site was level, covered with a good turf, and set amid picturesque surroundings.



With regard to entries, Cattle showed a slight decrease compared with Aberdeen last year, but that was not surprising in view of the present depressed state of the Cattle industry. Horses showed a gratifying increase in numbers over the figures of recent years. That increase was, of course, to some extent, accounted for by a large entry of Hunters. Sheep had secured a large entry, as was to be expected in the centre of an important sheep country. Pigs were fewer, but the number of Goats was considerably higher. As at Kelso in 1926, classes had been provided for Shepherds' Pack Sheep, but these had attracted only a moderate entry. The entries of Implements and Machinery in Motion were well up to the average, and would provide the usual interesting and instructive display.

The Flower Show continued to expand, and this year occupied a large section in proximity to the Main Square. This would be an attraction to many visitors.

Several new features were being tried out in the Showyard this year. Amongst these might be mentioned the arrangement whereby one-half of the Parade Ring would be left open so as to permit more freedom of movement to visitors and a more open view of the proceedings within the Ring. For Members a Refreshment and Snack Luncheon Counter had been provided, with direct access from both the Members' and Lady Members' Pavilions. This facility, it was believed, would be appreciated by members of both sexes.

In addition to the usual Parades of Prize Stock and Jumping Competitions, an attractive programme of events had been arranged for the Wednesday afternoon and evening, Thursday afternoon and evening, and Friday afternoon. These additional items consisted of a full-dress Musical Ride and Trick Riding Display by the 4/7th Dragoon Guards, Demonstrations of Sheep Dog Working, Parades of Foxhounds, &c.

Provided good weather was experienced during the Show, there appeared to be every reason to hope that it would prove to be one of the most successful Shows in the Border District.

#### *Alloa Show, 1937.*

Mr John W. Prentice, Craigrie Farm, Clackmannan, reported that, as already intimated, the Show of 1937 would be held at Alloa. The Directors had accepted an invitation to hold the Show on the same site as that on which it was held in 1929, this site having been placed at the disposal of the Town Council of Alloa and the Society by The Earl of Mar and Kellie, K.T. The ground was beautifully situated, ample in extent, and convenient of access.

The President and Office-bearers for the year had just been elected, and the actual work of preparation for the Show would commence soon after the conclusion of the Show at Melrose.

#### *Show of 1938.*

Colonel F. J. Carruthers of Dormont, Lockerbie, Honorary Secretary of the Society, reported as follows:—

At the Annual Meeting in January, it was resolved that the Show of 1938 be held in the Dumfries Show Division, provided a suitable site were available and satisfactory financial and other arrangements could be made. An invitation was received from the Town Council of Dumfries to hold the Show at that centre, and negotiations had been proceeding with regard to a suitable site. These negotiations were not yet completed, but it was believed that the Directors would be able to report to next General Meeting that satisfactory arrangements had been made to hold the Show at Dumfries in 1938.

#### *Motion by Captain Arthur R. M'Dougal.*

Captain Arthur R. M'Dougal, Blythe, Lauder, submitted the following motion, of which he had given notice, and which appeared under his name on the Agenda:—

"That the Highland and Agricultural Society shall restrict itself to the Science and Practice of Agriculture, as generally outlined in its Charters and Constitution.

"That it shall take no part in Political matters, for which it is neither constituted nor intended, and for which its Directorate holds no mandate from its Members."

He said there was a tendency on the part of the Society to dabble in matters of controversial politics. It had rather come to a head lately in the matter of the oats subsidy and the beef subsidy, where the Society had become involved in

political action, thereby deserting its old tradition and precedents, and, as he thought, acting illegally and outwith its charters. It was time they came to a decision and knew what they were doing, before they plunged in beyond their depth. Taking the case of oats, he said it was the function of the Society to investigate as to how they could improve the yield of oats, their quality and standing power, and generally to encourage and develop the technique of oat-growing in all ways. It was not the function of the Society to ask Parliament to give subsidies or tariffs, or to ask the Government to tax the people in order to give money to agriculturists. He was not applying any censure on anybody, but he said they must make their decision. He was not saying whether these various agricultural policies were good or bad, but could they imagine the directors of the Highland Society, ten, twenty, or thirty years ago, petitioning the Government to tax food?—it was unthinkable.

The Highland and Agricultural Society was a body constituted by Royal charter, and in the charters its powers were defined. Captain M'Dougal went on to deal with the terms of the charters, and he contended that political action by the Society was not only inadvisable but illegal and incompetent. He stated that even in the case of the education of agriculturists, the Society, before it could take part in that work, had to get permission through a new charter. The conclusion forced on the ordinary reader from these charters was that the Society was strictly confined to its charters, and that unless the Society's actions were authorised by the charters they were illegal. No powers were given that would cover political action.

A Royal charter implied recognition by the King, and, to his mind, they could not have the King or Royalty in any way mixed up with politics.

Finally, as regarded legality, he said there were life members who became so when there was no whisper of politics. They could not expect people who disagreed with their political actions to remain members and support them. If they brought in the apple of discord they were going to split the Society on political lines. There was no lack of political agricultural bodies, and the Highland Society could gain nothing by indulging in political action; they would only weaken their position.

Mr W. F. Bosomworth, Edinburgh, said there was no evidence submitted that the Society had entered into matters of political controversy or intended to do so.

Mr William Henderson, Lawton, Coupar-Angus, seconded the motion.

Brig.-General Sir Robert Gordon Gilmour, Bart., pointed out that in the Society there was an honourable, tacit understanding against the introduction of party politics, and that was much better than any written law, which would only lead to contention. He moved a direct negative to the motion.

Mr J. Milne Henderson, Edinburgh, asked why the Highland Society, which was the largest and most influential agricultural body, should not do everything they could to help agriculture, and work in unison with the other bodies? The Society had not been a political association, and the members had never been in the habit of voicing their political opinions there. He strongly supported the amendment, which he formally seconded.

Mr J. L. Anderson, Pittormie, Cupar, remarked that when the Society was given power under its charter to do a specific thing, there was an implied power to do something else if necessary in the carrying out of the specific purpose. He considered they were entitled to take what political action they believed necessary in order to achieve their purpose. To seek entirely to exclude the Society from political action was, in his view, going too far.

Colonel F. J. Carruthers said party politics had always been barred, and would continue to be barred.

On a division, Sir Robert Gordon Gilmour's amendment was carried by a large majority.

#### *Agricultural Education.*

Colonel F. J. Carruthers, Convener of the Education Committee, submitted a report on the Examination held at Leeds from 15th to 22nd April for the National Diploma in Agriculture. 160 candidates presented themselves for examination. 41 candidates were from Scotland. As a result of the Examination 51 Diplomas were awarded, 2 with Honours, 1 from Scotland. Of the 160 candidates, 6 appeared for all the subjects, and 3 of these obtained the Diploma. 70 had passed certain subjects previously and were completing the Examination this year, and of these 48 obtained the Diploma. The remaining 84 presented themselves for groups of three, four, or five subjects, and of these 39 passed in the subjects for which they appeared and were entitled to appear for the remaining subjects in 1937 or 1938.

*Science.**Report by Chemist.*

Dr J. F. Tocher, Consulting Chemist, submitted a report on the work done in his department during the past six months. The substance of Dr Tocher's report appears on pp. 241-247 of this volume.

*Vote of Thanks.*

On the motion of Mr Robert Macmillan, a cordial vote of thanks was accorded to the Earl of Home for presiding.

GENERAL MEETING OF MEMBERS HELD IN THE SHOWYARD,  
MELROSE, 24TH JUNE 1936.

THE DUKE OF Buccleuch and Queensberry, G.C.V.O., President,  
in the Chair.

The Chairman said that yesterday being His Majesty's birthday, a telegram was sent to the King on behalf of the members of the Society, as follows :—

"We, the President, Directors, and Members of the Highland and Agricultural Society of Scotland, assembled at the annual Show at Melrose, respectfully tender birthday greetings to Your Majesty, and express our best wishes for long life and happiness."

The message was signed by the President, the Chairman, and the Secretary.

He had received the following reply, signed by Lord Wigram, His Majesty's Private Secretary :—

"The King commands me to convey to you and all those associated with you in your message his sincere thanks for this expression of good wishes, which His Majesty much appreciates."

Proceeding, the Chairman said he understood it was the privilege of the President to address the members of the Society at that gathering and that it was customary not to make a long speech. He wished to say how very highly he valued the compliment paid to him by the members of the Society in electing him President for the year. He felt he owed an apology to the directors for not having taken a more active and helpful part himself in the arrangements for the Show. He felt tremendously fortunate in their chairman, Mr Macmillan, and their secretary, Mr Stirton; the Conveners of the committees, Major Strang Steel and Major Sharpe; and in all those directors and stewards who had assisted. His task, therefore, had been an easy one, and he had not felt so much ashamed at not being able to do more. He wished to express his own thanks to all those people who on the spot had been preparing for the Show. The local committee was a very strong one, and they had put themselves to immense trouble in the organisation of the Show. He was delighted to hear on all sides the enthusiastic appreciation of the choice of the site, and he believed it was one that had met with considerable approval.

He had been asking stewards and attending members what they thought of the exhibits, and he was informed—and he was sure, correctly—that the standard of exhibits this year was very high. He advised visitors to see as much as they could of all classes of stock and also the many other up-to-date features of other displays in different parts of the Showyard, not omitting forestry, where the exhibits were of a high class. In that way they would receive a great amount of education as well as much enjoyment.

The attendance at the Show on the first day was most encouraging, and he felt that it justified the policy of the directors in regard to charges. He believed the attendance on that (the second) day so far indicated that the Show was likely to be a popular one. He extended a very warm welcome to those who came from the various parts of Scotland, and hoped their visit to the Border country would be well rewarded.

The Highland and Agricultural Society of Scotland had a very important rôle to fill, and the directors to-day, as in the past, were men prominent in Scottish agriculture. The Society did much to render assistance to agriculture, and the present directors were worthily upholding their responsibilities. If one heard occasional criticism that the Society might do rather more than it did, he felt it was only necessary to say that the directors would welcome any practical and helpful suggestions, and would be glad to investigate them in order to advance agriculture. He maintained that the Society, in accordance with the wishes of members, had endeavoured to co-operate with all other national and representative organisations to secure better conditions for agriculture.

Continuing, the President said they would be only too glad to acknowledge the help which had been rendered by Parliament in many directions to assist their industry. It would also be quite fair to express a wish that a little more of that policy, so helpful to other industries by increasing trade and employment, would be allotted to agriculture. If only a little more each year could be agreed upon, he felt it would strengthen and encourage their industry a great deal. They felt there had been some improvement in the last few years, but it did seem to him that the losses amongst farmers a few years ago were serious, and since then profits had not been large enough to enable those engaged in agriculture to play that part in the national recovery which they would like to do. If only a little luck in farming and a little more encouragement from Parliament made it possible for those engaged in the industry to make rather higher profits than they had been making, it would enable them to spend money most usefully on the industry in many necessary ways.

A little more generous treatment towards agriculture would reveal that there was a good spirit among farmers in Scotland to-day, and that they would respond by doing their utmost to play their part in the advancing of national recovery. They would be willing to put more back into the industry, to improve the condition of the land and the equipment, and they would be able to do more for those employed in connection with farming. They were living in a time when expenditure on agriculture was very necessary in many different directions, and not the least of these was the improvement of farm cottages. Many people in Scotland had been doing their utmost to improve their farm cottages in the last few years, but it was a matter of considerable expenditure, which they all could not face. He was sure that people would do much more than they were now able to do if things were more prosperous. He did feel that the industry had every reason to continue to impress upon Parliament the advantages that would accrue to the country through the giving of more assistance to agriculture.

There was one thing affecting the sheep industry to which he would like to refer. They saw at that Show very fine exhibits of sheep of the different breeds, but it was very disconcerting to learn that serious losses had been caused to hill farmers in particular by the different forms of sheep disease in the last few years. It seemed to him from what he was told that the losses were on the increase, and not on the decrease, and that different forms of the same disease or of new diseases were appearing. He would like to draw attention to the extremely good work done by the Animal Diseases Research Association and by the chairman and professors who were working with him in helping to combat losses of sheep stock. He would also like to draw attention to the need for increasing support for that Society and other organisations qualified to undertake the work of research. It was a question which should be dealt with quickly, and steps should be taken to enable the Animal Diseases Research Association to carry out their experiments and investigations on a larger scale than they were able to do at present. He hoped he was not an alarmist on that subject, and that he had their sympathetic approval in regard to those remarks. He thanked them all for the support they were giving to the Highland Society, and said he had no doubt that the Society could count on a continuance of their help.

#### *Votes of Thanks.*

Mr J. P. Ross-Taylor, Mungoswalls, Duns, moved a vote of thanks to the local joint committee, representing the Town Councils of Melrose and Galashiels and the County Council of Roxburgh, for the excellent site provided for the Show, and to the Town Council of Melrose for a free supply of water. Those who were strangers to this part of Scotland would now realise that Providence had been kind to them in many ways, and he thought they would agree that the charm of the Border country was centred in this area. He thought it would be difficult to find a better site than they had on this occasion, and they were much indebted to the local joint committee. He specially mentioned the name of the owner of the

ground, Dr Curle of Melrose, who, when he was approached about the letting of the ground for the Show, at once agreed to do so in a most public-spirited way. He emphasised that, because Dr Curle looked upon his parks as a hobby and was proud of them. When one went to Melrose to make any negotiations, there was one man through whom they had to do it, and that was Provost Curle. When anything was wanted in regard to water or gas they were referred to Provost Curle. He would like to thank Provost Curle, on behalf of the Society, for the way in which he had made the necessary arrangements and for the able way in which he had guided the local committee.

Mr Charles W. Ralston, Holmhill, Thornhill, seconded, and the motion was adopted.

Provost F. R. N. Curle, Melrose, in acknowledging the vote of thanks, said that two years ago, when he met the visiting committee from the Highland Society, he used all the little eloquence he possessed to try to convince them that that would make a good site. He was glad to feel that apparently they did not consider his plea was overdrawn, and he hoped that Melrose would become one of their regular places of call in the future. At times in the last two years he very much doubted the wisdom of his action in inviting the Society, although now he did not regret it. When the Society went to a big town they might send up the consumption of water two or three per cent; they might slightly increase the amount of traffic on the roads; but when they came to a place like Melrose they increased the consumption of water 100 per cent and they increased the use of the roads at least 1000 per cent, so that they would, he was sure, make allowances for any deficiencies. He was somewhat relieved by spending most of these four days in the Showyard, where he could not be called up by anxious householders who had not got any water. It had been a source of very great interest seeing that Show taking form and coming to life, and, of course, a visit to it must be a pleasure, because every taste was so amply catered for.

Colonel F. J. Carruthers, of Dormont, Lockerbie, moved that a vote of thanks be accorded to Major Strang Steel of Philiphaugh, Convener, and the members of the local committee of management for the efficient and successful manner in which they had carried through the arrangements for the Show. It was hardly necessary, he said, to tell anyone in the Border district that a committee of which Major Strang Steel had been appointed Convener was going to do its duty properly. It went without saying that that committee was going to be an efficient one, and he thought they would all agree that the arrangements that had been made for that Show had been in every way most efficient. Of course, with the exception of the Convener and one or two at the head of the committee, the real business of the local committee took place yesterday when they were attending on the judges of stock. That in very many cases was a really hard day's work. The last time the Show was in the Border district, at Kelso, there were two or three representatives present from the Royal Agricultural Society, who said to him that what struck them most about their Showyard arrangements was that they got all their hard work done for nothing, whereas at the Royal Show they had to pay for it. The local committee gave their services free at very often considerable personal inconvenience. The Society was very grateful to the attending members and to the local committee generally for all the work they had done.

Dr T. G. Nasmyth, Edinburgh, seconded, and the motion was heartily adopted.

Major S. Strang Steel of Philiphaugh, in acknowledging, said the members of the committee had carried through their duties with the greatest of pleasure, and it was a great satisfaction to know that the site and the lay-out of the Show-ground had met with such universal approval.

Mr Alexander Murdoch, East Hallside, Cambuslang, moved the following resolution: "That the Society express its appreciation of the complete and satisfactory arrangements made by the railway companies for the expeditious transport of stock, implements, and visitors to the Show." It seemed to him, he said, that their Secretary would probably require in future to alter that resolution slightly, because nowadays, while the railway companies did bring many of the public, the stock, and the implements, &c., a big part was brought by motor-cars. In future it was possible that many might be brought by aeroplane, and they would need an aerodrome. They were very much indebted to the railway companies for the way in which they transported the stock, the implements, and the public. So far as he was aware they had not had a single complaint against the railway companies.

Mr James R. Lumsden of Arden, who seconded, said they were quite satisfied that the railway companies would carry out the arrangements for the return of the passengers, the stock, and the implements as efficiently as they brought them to the Show.

Mr R. Gardiner, representing the L.N.E. Railway, who replied, said it was a great satisfaction to the railway companies responsible for the transport of stock

and passengers to learn that the arrangements had worked out so satisfactorily. He would have great pleasure in informing his General Manager of the terms of the resolution. He expressed the hope that with the improved railway facilities, coupled with the road transport, to which Mr Murdoch rightly referred, they would have a successful Show at Melrose and that the balance would be on the right side.

*Vote of Thanks to the President.*

The Earl of Home, in proposing a vote of thanks to the President, said they were not only indebted to the Duke of Buccleuch for his help in connection with the arrangements for the Show, but for having also persuaded his charming sister, H.R.H. the Duchess of Gloucester, to visit the Showyard.

ANNIVERSARY GENERAL MEETING, 6TH JANUARY 1937.

Provost JAMES P. YOUNGER, Alloa, Vice-President, in the Chair.

The Chairman said that he would like to take the opportunity of expressing his grateful thanks to all the members of the Society for having appointed him a Vice-President of the Society, which he considered a very great privilege.

*Loyal Address to His Majesty The King.*

The Secretary read the following Loyal Address to His Majesty The King, the members present upstanding. The Address was unanimously adopted, and it was ordered to be signed, sealed, and despatched to the Secretary of State for Scotland, for submission to His Majesty. (Copy of the Address appears on page 9 of this volume.)

*Annual Report.*

Mr J. P. Ross-Taylor, Mungoswalls, Duns, Chairman of Directors, moved the adoption of the Annual Report by the Directors. He pointed out that some of the items in the Report would be the subject of special Resolutions later on. He referred briefly to the various matters contained in the Report.

Mr J. Milne Henderson, Edinburgh, in referring to the report on the Live-Stock policy, said that he regretted that the Directors felt compelled to withdraw from the Joint Committee, which had done such splendid work. He admitted there were difficulties in the way, but it was a matter of paramount importance to the Agricultural community of Scotland, and he could not understand why the leading Agricultural Society should withdraw at that stage. He was quite aware that one of the bodies represented on the Joint Committee had wanted to go their own way, but he did not see why the Society's representatives should have stood aside. Of course, the plea was made that they were not asked to go independently as representing the Society, but he felt sure that if they had insisted on appearing, no voice would have been raised against them. He suggested that they should go back on the resolution to withdraw, so that, with a united voice, the Government would be forced to modify their present policy and go back to the policy laid down in the White Papers of July 1934 and March 1935.

Mr Ross-Taylor, in replying, stated that the Directors had not withdrawn. The Society, he thought, had rendered a very good service to the Live-Stock producers in Scotland by calling a conference of all the interested bodies. Arising out of that Meeting with the other bodies, a deputation had proceeded to London, where they interviewed a number of Committees, the Secretary of State for Scotland, and the Minister of Agriculture. Following on that, they were received by members of the Cattle Committee, and went into details regarding the Live-Stock policy. As was rightly stated in the Report, the Society received no separate invitation from the Cattle Committee to attend a further conference. They were politely told that, while they would have been received as members of the Joint Committee, there was no object in their attending as individuals. Apart from that, the work they had set out to do had been done. The Joint Committee went there with the united voice of Scotland in support of the White Papers of 1934 and 1935. The various bodies and individuals they met at West-

minister were thoroughly satisfied that they were on the right lines. Unfortunately it had come about that the present policy had fallen very far short of the Government's original policy. The Dominions were chiefly to blame. They would not agree to anything in the nature of a duty, and he supposed that the Government could not make any more of it. He did not propose to go over the ground, but it was just possible that half a loaf was better than none at all. While the details of the Government's proposals were not known, he thought that, in the end, it would be found that the position of the home breeder would be much more favourable than it was to-day.

Mr Ross-Taylor went on to add that, at a Meeting of Directors that afternoon, the position had again been considered, and it had been agreed that the Society's representatives on the Joint Committee, strengthened by the addition of another member, should be asked to look into the matter and see if anything further could be done.

Mr Milne Henderson said that the statement given by Mr Ross-Taylor was entirely satisfactory, and he added that all that was wanted was a watching brief.

Mr James R. Lumsden of Arden, Dumbartonshire, in seconding the adoption of the Report, referred to the Alloa Show to be held that year from 22nd to 25th June. He reminded the members that the Show was to be held at Alloa Park, Alloa, on the same site on which the Show of 1929 was held. The amount to be offered in prizes reached a total of £3775. This was in addition to the usual number of valuable Challenge Cups, Medals, and Special Prizes. Several new features which had been introduced at recent Shows would be continued at Alloa. He thought that the new bridge over the Forth at Kincardine would make it much easier for the public to attend the Show, especially those from Edinburgh and the East of Scotland. Given good weather, there was every reason to hope that the Alloa Show would be one of the most successful held in the Stirling Show Division.

The Report was adopted.

#### *Election of Members.*

The Secretary submitted a list of 136 Candidates for election to membership. These were balloted for and duly elected.

#### *Honorary Member.*

On the motion of Colonel F. J. Carruthers of Dormont, Professor R. Stanfield was unanimously elected an Honorary Member of the Society, in recognition of the valuable services which he had rendered to the Society as Consulting Engineer during the past thirty years. In moving the election, Colonel Carruthers said that Honorary Membership was restricted to very few and very distinguished men. Professor Stanfield had been appointed Consulting Engineer in 1906, and his services had also been employed for several years previously. He was specially pleased that this motion had been given to him to deal with, because he joined the Board the same year, and Professor Stanfield and he might be said to have been comrades-in-arms for the last thirty years. During all those years Professor Stanfield had been a prominent personality at their Annual Shows, and his genial presence, apart from his active work, had been one of the features of the Shows. He was sure they all hoped that Professor Stanfield would be attending their Shows for many years to come, and they would all recognise that they had done the right thing that day in appointing him an Honorary Member of the Society.

Professor Stanfield, in reply, recalled that his first connection with the Society was in 1899, when he carried out a series of oil-engine tests—the first held in Great Britain—at the Edinburgh Show. His interests from the first, he said, had been agricultural. He thanked them for their kindness in the past and for the honour which he had now received.

#### *Annual Accounts and Special Grants.*

The Earl of Home, K.T., Treasurer of the Society, submitted the Accounts for the year ended 30th November 1936. Receipts from all sources, he said, had amounted to £29,296, and payments to £28,827. There was a credit balance of £468. If the £1211 received in Life Subscriptions were treated as capital, there would be a deficit on the year's working of £748, approximately equal to the amount given in Special Grants. He formally moved the adoption of the Accounts and approval of the following Grants: £100 to the Scottish Agricultural

Organisation Society; £10 to the Scottish Society for the Prevention of Cruelty to Animals.

Mr James Durno, Crichtie, Inverurie, seconded, and the Accounts were adopted and the Special Grants unanimously approved.

Mr J. Milne Henderson said the Society was putting the various institutions upon the dole. He thought that the Grants given were far too infinitesimal. They were a wealthy society, with a capital set apart of £182,000. They should not hoard this up, but should take up some special scheme and let the agricultural community see that they were interested in something particular.

He suggested that the Directors should take the matter into their consideration and bring up a proposal to make a grant of £15,000 to the Animal Diseases Research Association.

The Earl of Home said that during Mr Henderson's speech he had watched the faces of the Finance Committee, and they had certainly listened to it with rapt attention.

#### *Argyll Naval Fund.*

On the motion of Mr James M'Laren, Cornton, Bridge of Allan, the Report on the Argyll Naval Fund was adopted. The nominal capital of the fund now amounts to £10,025, 1s. 6d. The income for the year 1936 amounted to £329, 11s. 11d., whilst the expenditure was £227, 5s. 9d., comprising grants of £40 each to 5 Naval Cadets, £20 to 1 Naval Cadet, and £7, 5s. 9d. miscellaneous expenses.

#### *Grants to Local Societies.*

Mr J. E. Kerr of Harviestoun, Dollar, Convener of the Shows Committee, submitted the Report on Grants to Local Societies, and the Report was approved. The List of Grants appears in the Appendix to this volume.

#### *Show of 1939.*

Mr John E. B. Cowper, Gogar House, Corstorphine, moved: "That, provided a suitable site is available, and satisfactory financial and other arrangements can be made, the Society's Show of 1939 be held in the Edinburgh Show Division."

Dr T. G. Nasmyth, Edinburgh, in seconding, said that an excellent site would be available a little farther west than that of the last Edinburgh Show. The Town Council, he knew, would give every encouragement. The tramways had been extended to the site, and buses also ran in that direction. He was sure a most successful Show would be held on the site—even more successful than that held in 1931.

#### *Chemist's Report.*

Dr J. F. Tocher, Consulting Chemist to the Society, submitted a Report on the work done in his department during the past half-year. The substance of the Report appears on pp. 241-247 of this volume.

#### *Vote of Thanks.*

On the motion of Mr T. G. Wilson, Carbeth, a hearty vote of thanks was accorded to Provost James P. Younger for presiding.

Provost Younger, in reply, said he could assure the Society that the Burgh over which he had the honour to preside was looking forward with great pleasure to housing the Society next June, and he hoped they would have a successful Show.





# APPENDIX

## PREMIUM BOOK

OF

## THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND 1937

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Address for communications:

JOHN STIRTON, Secretary,  
 The Highland and Agricultural Society of Scotland,  
 8 Eglinton Crescent,  
 Edinburgh 12.

## GENERAL NOTICE.

THE HIGHLAND SOCIETY was instituted in the year 1784, and incorporated by Royal Charter in 1787. Its operation was at first limited to matters connected with the improvement of the Highlands of Scotland; but the supervision of certain departments, proper to that part of the country, having been subsequently committed to special Boards of Management, several of the earlier objects contemplated by the Society were abandoned, while the progress of agriculture led to the adoption of others of a more general character. The exertions of the Society were thus early extended to the whole of Scotland, and have since been continuously directed to the promotion of the science and practice of agriculture in all its branches.

In accordance with this more enlarged sphere of action, the original title of the Society was altered, under a Royal Charter, in 1834, to THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

The Society avoids questions of political controversy, but in other public matters of practical concern to agriculture it seeks to guard and promote, by every means in its power, the welfare of all interested in the agriculture of Scotland.

Among the more important measures which have been effected by the Society

1. Agricultural Meetings and General Shows of Stock, Implements, &c., held in the principal towns of Scotland, at which exhibitors from all parts of Great Britain, Northern Ireland and the Irish Free State are allowed to compete.

2. A system of District Shows instituted for the purpose of improving the breeds of Stock most suitable for different parts of the country, and of aiding and directing the efforts of Local Agricultural Societies and Associations.

3. A scheme of Awards to Farm Workers for long and approved service in Scotland.

4. The encouragement of Agricultural Education, under powers conferred by a supplementary Royal Charter, granted in 1856, and authorising the Society to grant Diplomas to Students of Agriculture; and by giving grants in aid of education in Agriculture and allied sciences. In 1900 the Society discontinued its own Examination, and instituted jointly with the Royal Agricultural Society of England an Examination for a National Diploma in Agriculture.

5. The institution of an Examination for a National Diploma in Dairying, jointly with the Royal Agricultural Society of England and the British Dairy Farmers' Association.

6. The institution of an Examination in Forestry for First and Second Class Certificates. Terminated in 1935 in accordance with arrangements made with the Royal Scottish Forestry Society.

7. The advancement of the Veterinary Art, by conferring Certificates on Students who have passed through a prescribed curriculum, and who are found, by public examination, qualified to practise. Terminated in 1881 in accordance with arrangements made with the Royal College of Veterinary Surgeons.

8. The appointment of a Chemist for the purpose of promoting the application of science to agriculture.

9. The establishment of a Botanical Department.

10. The appointment of an Entomologist to advise members regarding insect pests, &c.

11. The annual publication of the 'Transactions,' comprehending papers by selected writers, Prize Reports, and reports of experiments, also an abstract of the business at Board and General Meetings, and other communications.

12. The management of a fund left by John, 8th Duke of Argyll (the original President of the Society), to assist young natives of the Highlands who enter His Majesty's Navy.

## CONSTITUTION AND MANAGEMENT.

The general business of THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND is conducted under the sanction and control of the Royal Charters, referred to above, which authorise the enactment of Bye-Laws.

The Office-Bearers consist of a President, Four Vice-Presidents, Thirty-two Ordinary and Twenty Extraordinary Directors, a Treasurer, an Honorary and an Acting Secretary, an Auditor, and other Officers.

The Supplementary Charter of 1856 provides for the appointment of a Council on Education, consisting of Sixteen Members—Nine nominated by the Charter and Seven elected by the Society.

## STATEMENT OF PRIVILEGES OF MEMBERS.

### MEMBERS OF THE SOCIETY ARE ENTITLED—

1. *To receive a free copy of the 'Transactions' annually.*
2. *To apply for District Premiums that may be offered, and for Long Service Awards for Agricultural Employees.*
3. *To report Ploughing Matches for Medals that may be offered.*
4. *To Free Admission to the Shows of the Society.*
5. *To exhibit Live Stock and Implements at reduced rates.*

Firms are not admitted as Members; but if one partner of a firm becomes a Member the firm is allowed to exhibit at Members' rates.

6. *To have Fertilisers and Feeding-Stuffs, &c., analysed at reduced fees.*
7. *To obtain Reports on the Animal Enemies of Crop Plants and Live Stock (including Poultry).*
8. *To attend and vote at General Meetings of the Society.*
9. *To vote for the Election of Directors.*  
*&c., &c.*

### ANALYSES OF FERTILISERS AND FEEDING-STUFFS, &c.

The Scale of Fees in respect of Analyses made by the Society's Chemist for Members of the Society will be found under "Chemical Department."

Valuations of manures, according to the Society's scale of units, will be supplied on application being made.

*For further particulars, see under Chemical Department.*

*Chemist.*—Mr J. F. TOCHER, D.Sc., F.I.C., Crown Mansions, 41½ Union Street, Aberdeen.

### REPORTS ON THE ANIMAL ENEMIES OF CROP PLANTS AND LIVE STOCK (INCLUDING POULTRY).

The Consulting Entomologist is prepared to send to any Member of the Society a Report on damage to or diseases of plants and animals due to animal agency (Insects, Mites, Worms, Snails, Slugs, Birds, and the Smaller Mammals).

*For further particulars, see under Entomological Department.*

*Entomologist.*—Mr A. E. CAMERON, M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh.

## TERMS OF MEMBERSHIP, &c.

The influence and usefulness of the Society depend mainly upon its strength in membership. The Members, through the Directors whom they elect, have the practical control of the affairs of the Society. The stronger the body of Members, the greater will be the usefulness of the Society. It will therefore be to both their own and the public advantage if all who are interested in agriculture, and who are not already enrolled, should at once become Members of the Society.

### ELECTION OF MEMBERS.

Candidates for admission to the Society must be proposed by a Member, and are elected at the half-yearly General Meetings in January and June. It is not necessary that the proposer should attend the Meeting.

### RATES OF SUBSCRIPTION.

#### HIGHER SUBSCRIPTION.

The ordinary annual subscription is £1, 3s. 6d., and the ordinary subscription for life-membership is £12, 12s. : or after ten annual payments have been made, £7, 7s.

#### LOWER SUBSCRIPTION.

Proprietors farming the whole of their own lands, whose rental on the Valuation Roll does not exceed £500 per annum, and all Tenant-Farmers, Secretaries or Treasurers of Local Agricultural Associations, Factors resident on Estates, Land Stewards, Foresters, Agricultural Implement Makers, Grain, Seed and Manure Merchants, Agricultural Auctioneers, Cattle Dealers and Veterinary Surgeons, none of them being also owners of land to an extent exceeding £500 per annum, and such other persons as, in respect of their official or other connection with agriculture, the Board of Directors may consider eligible, are admitted on a subscription of 10s. annually, which may be redeemed by one payment of £7, 7s., and after eight annual payments of 10s. have been made, a Life Subscription may be purchased for £5, 5s., and after twelve such payments, for £3, 3s.

*It must be stated, on behalf of Candidates claiming to be admitted at the Lower Rate of Subscription (10s.), under which of the above designations they are entitled to be admitted at the Lower Rate.*

Subscriptions are payable on election, and afterwards annually in January.

According to the Charter, a Member who shall not have objected to his election, on the same being intimated to him by the Secretary, cannot retire until he has paid, in annual subscriptions or otherwise, an amount equivalent to a life composition.

Members are requested to send to the Secretary the names and addresses of Candidates proposed for admission to the Society, at the same time stating whether the Candidates should be admitted at the £1, 3s. 6d. or 10s. rate.

**Patron of the Society.—HIS MAJESTY THE KING.**

## OFFICERS AND DIRECTORS FOR 1936-1937.

### President.

THE EARL OF MAR AND KELLIE, K.T., Alloa Park, Alloa.

### Vice-Presidents.

THE DUKE OF MONTROSE, C.B., C.V.O., Buchanan Castle, Drymen.

THE EARL OF ANCASTER, Drummond Castle, Crieff.

Lieut.-Colonel Sir IAIN COLQUHOUN of Colquhoun and Luss, Bt., D.S.O.,  
Rossdhu, Luss.

Provost JAMES P. YOUNGER, Alloa.

Year of  
Election.

### Ordinary Directors.

1933	JOHN W. PRENTICE, Craigrie Farm, Clackmannan.
	JAMES WYLLIE, Tinwald Downs, Dumfries.
	.....
1934	THOMAS CLARK, Muirtons, Perth.
	LORD ROWALLAN, Rowallan, Kilmarnock.
	GEORGE GRANT of Glenfarclas, Blacksboat.
	The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.
	CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.
1935	Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.
	Sir HECTOR D. MACKENZIE of Gairloch, Bt., Conan House, Conon Bridge.
	JAMES PATON, Kirkness, Glencraig.
	ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.
	Colonel ROBERT W. WALKER, Culter Lodge, Milltimber, Aberdeen- shire.
	THOMAS TEMPLETON, Sandyknowe, Kelso.
	JAMES R. LUMSDEN of Arden, Dumbartonshire.
1936	G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.
	.....
	WILLIAM MEIKLEM, Bennoch Park, Kirkcaldy.
	A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.
	JOHN P. SLEIGH of St John's Wells, Fyvie.
	Major ROBERT W. SHARPE of The Park, Earlston.
	T. MERCER SHARP, Bardrill, Blackford.
	JAMES WITHER, Awhirk, Stranraer.
	FRANCIS W. WALKER of Leys, Leys Castle, Inverness.
	JOHN D. ALLAN, Culthill Implement Works, Murthly.
1936	WILLIAM BROWN, Craigton, Bishopton.
	Lieut.-Colonel GARDEN BEAUCHAMP DUFF, D.S.O., of Hatton, Hatton Castle, Turriff.
	J. P. ROSS-TAYLOR, Mungoswalls, Duns.
	J. E. KERR of Harviestoun, Dollar.
	WILLIAM MONTGOMERY, North Milton, Kirkcudbright.
	WILLIAM I. ELLIOT, Middletoun, Stow.

Year of  
Election.

### Extraordinary Directors.

- |      |   |  |
|------|---|--|
| 1935 | { | JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh. |
|      |   | JAMES M'LAREN, Cornnton, Bridge of Allan.                |
|      |   | JOHN HEWETSON, Baltersan, Newton-Stewart.                |
|      |   | IAN M. CAMPBELL, Bal Blair, Invershin.                   |
|      |   | ALEXANDER FORBES, Rettie, Banff.                         |
| 1936 | { | Major S. STRANG STEEL of Philiphaugh, Selkirk.           |
|      |   | JAMES DURNO, Crichtie, Inverurie.                        |
|      |   | W. P. GILMOUR, Balmangan, Kirkcudbright.                 |
|      |   | Captain THOMAS ELLIOT, Thirlestane, Lauder.              |
|      |   | GAVIN RALSTON, Glamis House, Glamis.                     |

### Show Division Directors.

- |      |   |  |
|------|---|--|
| 1936 | { | WALTER A. AITKENHEAD, Haining Valley, Linlithgow.                |
|      |   | A. Y. ALLAN, Aitkenbar, Dumbarton.                               |
|      |   | Captain JAMES CRAIG, Innergeldie, Comrie.                        |
|      |   | WILLIAM M'LAREN, Inch, Kincardine, Alloa.                        |
|      |   | THOMAS M'LAY, Dunvegan, Causewayhead, Stirling.                  |
|      |   | PETER ROBERTSON, Home Farm, Dalmuir.                             |
|      |   | WILLIAM M'NAIR SNADDEN of The Coldoch, Blair Drummond, Stirling. |
|      |   | DUNCAN M. STEWART of Millhills, Crieff.                          |
|      | { | ANDREW H. TELFER, The Whins, Alloa.                              |
|      |   | T. G. WILSON, Carbeth Home Farm, Balfour Station.                |

### Chief Officials, &c.

THE EARL OF HOME, K.T., The Hirsell, Coldstream, *Treasurer*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, *Honorary Secretary*.  
 JOHN STIRTON, 8 Eglinton Crescent, Edinburgh, *Secretary*.  
 THOMAS W. RUSSELL, *Chief Clerk*.  
 JOHN WATT, *Second Clerk*.  
 GEORGE JAMES GREGOR, C.A., 8 York Place, Edinburgh, *Auditor*.  
 J. F. TOCHER, D.Sc., LL.D., F.I.C., 41½ Union Street, Aberdeen, *Chemist*.  
 HENRY RAESIDE, 8 Eglinton Crescent, Edinburgh, *Master of Works*.  
 A. E. CAMERON, M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh, *Consulting Entomologist*.  
 The Very Rev. CHARLES L. WARR, D.D., 63 Northumberland Street, Edinburgh, *Chaplain*.  
 TODS, MURRAY, & JAMIESON, W.S., 66 Queen Street, Edinburgh, *Law Agents*.  
 WILLIAM BLACKWOOD & SONS LTD., 45 George Street, Edinburgh, *Publishers*.  
 HAMILTON & INCHES, Princes Street, Edinburgh, *Silversmiths*.  
 ALEXANDER KIRKWOOD & SON, 9 St James' Square, Edinburgh, *Medallists*.  
 JOHN MENZIES & CO. LTD., 6 Castle Street, Edinburgh, *Advertising Agents*.  
 JOHN REID, 55 Blenheim Place, Aberdeen, *Showyard Erector*.  
 J. P. LAUDER, *Officer and Caretaker*.

### Chairman of Board of Directors.

J. P. ROSS-TAYLOR, Mungoswalls, Duns.



### Chairmen of Committees.

1. *Argyll Naval Fund* . . . MACLACHLAN OF MACLACHLAN, Castle Lachlan, Strathlachlan.
2. *Finance, Chambers, and Law* The EARL OF HOME, K T , The Hirsell, Coldstream.
3. *Publications* . . . Colonel F. J. CARRUTHERS of Dormont, Lockerbie.
4. *Shows* . . . J. E. KERR of Harviestoun, Dollar.
5. *Implements and Machinery* . J. P. ROSS-TAYLOR, Mungoswalls, Duns.
6. *Science* . . . Major ROBERT W. SHARPE of The Park, Earlston.
7. *General Purposes* . . . J. P. ROSS-TAYLOR, Mungoswalls, Duns.
8. *Education* . . . Colonel F. J. CARRUTHERS of Dormont, Lockerbie.
9. *Office-Bearers* . . . J. P. ROSS-TAYLOR, Mungoswalls, Duns.

## COMMITTEES FOR 1936-1937.

### 1. ARGYLL NAVAL FUND.

MACLACHLAN OF MACLACHLAN, Castle Lachlan, Strathlachlan, *Convener*.  
 Lieut.-Colonel GARDEN BEAUCHAMP DUFF, D.S.O., of Hatton, Hatton Castle, Turfiff.  
 The EARL OF ELGIN and KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.  
 Sir JOHN GILMOUR, Bt., P.C., D.S.O., M.P., of Montrave, Leven.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES R. LUMSDEN of Arden, Dumbartonshire.  
 Sir HECTOR D. MACKENZIE of Garloch, Bt., Conan House, Conon Bridge.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 Sir HUGH SHAW-STEWART, Bt., K.C.B., Ardgowan, Inverkip.  
 J. P. ROSS-TAYLOR, Mungoswalls, Duns, Chairman of Board of Directors, *ex officio*.  
 The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary, *ex officio*.

### 2. FINANCE, CHAMBERS, AND LAW.

The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *Convener*.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 JAMES DURNO, Crichtie, Inverurie.  
 GEORGE GRANT of Glenfarclas, Blacksboat.  
 WILLIAM C. HUNTER of Arngask, Glenfarg.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES R. LUMSDEN of Arden, Dumbartonshire.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 JAMES PATON, Kirkness, Glencraig.  
 J. P. ROSS-TAYLOR, Mungoswalls, Duns.  
 Major ROBERT W. SHARPE of The Park, Earlston.  
 T. G. WILSON, Carbeth Home Farm, Balfron Station.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary, *ex officio*.  
 GEORGE JAMES GREGOR, C.A., Auditor, *ex officio*.

### 3. PUBLICATIONS.

Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*Convener.*

Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.

JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.

JAMES DURNO, Crichtie, Inverurie.

ALEXANDER FORBES, Rettie, Banff.

GEORGE GRANT of Glenfarclas, Blacksboat.

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JAMES PATON, Kirkness, Glencraig.

J. P. ROSS-TAYLOR, Mungoswalls, Duns.

LORD ROWALLAN, Rowallan, Kilmarnock.

The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.

T. G. WILSON, Carbeth Home Farm, Balfron Station.

The EARL OF HOME, K.T., The Hirsel, Coldstream, Treasurer, *ex officio*.

### 4. SHOWS.

J. E. KERR of Harviestoun, Dollar, *Convener.*

JAMES WYLLIE, Tinwald Downs, Dumfries, *Vice-Convener.*

WALTER A. AITKENHEAD, Haining Valley, Linlithgow.

A. Y. ALLAN, Aitkenbar, Dumbarton.

JOHN D. ALLAN, Culthill Implement Works, Murthly.

Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.

WILLIAM BROWN, Craigton, Bishopton.

IAN M. CAMPBELL, Bal Blair, Invershin.

THOMAS CLARK, Muirtons, Perth.

JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.

Captain JAMES CRAIG, Innergeldie, Comrie.

Lieut.-Colonel GARDEN BEAUCHAMP DUFF, D.S.O., of Hatton, Hatton  
Castle, Turriff.

JAMES DURNO, Crichtie, Inverurie.

Captain THOMAS ELLIOT, Thirlestane, Lauder.

WILLIAM I. ELLIOT, Middletoun, Stow.

ALEXANDER FORBES, Rettie, Banff.

W. P. GILMOUR, Balmangan, Kirkcudbright.

GEORGE GRANT of Glenfarclas, Blacksboat.

JOHN HEWETSON, Baltersan, Newton-Stewart.

JAMES R. LUMSDEN of Arden, Dumbartonshire.

Sir HECTOR D. MACKENZIE of Gairloch, Bt., Conan House, Conan  
Bridge.

JAMES M'LAREN, Cornton, Bridge of Allan.

WILLIAM M'LAREN, Inch, Kincardine, Alloa.

THOMAS M'LAY, Dunvegan, Causewayhead, Stirling.

WILLIAM MEIKLEM, Bennoch Park, Kirkcaldy.

WILLIAM MONTGOMERY, North Milton, Kirkcudbright.

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

JAMES PATON, Kirkness, Glencraig.

JOHN W. PRENTICE, Craigrie Farm, Clackmannan.

CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.

GAVIN RALSTON, Glamis House, Glamis.

PETER ROBERTSON, Home Farm, Dalmuir.

J. P. ROSS-TAYLOR, Mungoswalls, Duns.  
 LORD ROWALLAN, Rowallan, Kilmarnock.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 T. MERCER SHARP, Bardrill, Blackford.  
 Major ROBERT W. SHARPE of The Park, Earliston.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 JOHN P. SLEIGH of St John's Wells, Fyvie.  
 WILLIAM M'NAIR SNADDEN of The Coldoch, Blair Drummond, Stirling.  
 A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.  
 Major S. STRANG STEEL of Philiphaugh, Selkirk.  
 DUNCAN M. STEWART of Millhills, Crieff.  
 ANDREW H. TELFER, The Whins, Alloa.  
 THOMAS TEMPLETON, Sandyknowe, Kelso.  
 FRANCIS W. WALKER of Leys, Leys Castle, Inverness.  
 Colonel ROBERT W. WALKER, Culter Lodge, Milltimber, Aberdeenshire.  
 T. G. WILSON, Carbeth Home Farm, Balfron Station.  
 JAMES WITHER, Awhirk, Stranraer.  
 The EARL of HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.

## 5. IMPLEMENTS AND MACHINERY.

J. P. ROSS-TAYLOR, Mungoswalls, Duns, Chairman of Board of Directors,  
*Convener*.  
 JAMES PATON, Kirkness, Glencraig, *Vice-Convener*.  
 JOHN D. ALLAN, Culhill Implement Works, Murthly.  
 Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.  
 THOMAS CLARK, Muirtons, Perth.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 Lieut.-Colonel GARDEN BEAUCHAMP DUFF, D.S.O., of Hatton, Hatton  
 Castle, Turrit.  
 ALEXANDER FORBES, Rettie, Banff.  
 W. P. GILMOUR, Balmangan, Kirkcudbright.  
 JOHN HEWETSON, Baltersan, Newton-Stewart.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 WILLIAM M'LAREN, Inch, Kincardine, Alloa.  
 THOMAS M'LAY, Dunvegan, Causewayhead, Stirling.  
 WILLIAM MONTGOMERY, North Milton, Kirkcudbright.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 JOHN W. PRENTICE, Craigrie Farm, Clackmannan.  
 CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.  
 PETER ROBERTSON, Home Farm, Dalmuir.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 T. MERCER SHARP, Bardrill, Blackford.  
 Major ROBERT W. SHARPE of The Park, Earliston.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 JOHN P. SLEIGH of St John's Wells, Fyvie.  
 ANDREW H. TELFER, The Whins, Alloa.  
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 JAMES WITHER, Awhirk, Stranraer.  
 JAMES WYLLIE, Tinwald Downs, Dumfries.  
 The EARL of HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*ex officio*.

## 6. SCIENCE.

- Major ROBERT W. SHARPE of The Park, Earlston, *Convener*.  
 LORD ROWALLAN, Rowallan, Kilmarnock, *Vice-Convener*.  
 Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.  
 IAN M. CAMPBELL, Bal Blair, Invershin.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 JAMES DURNO, Crichtie, Inverurie.  
 Captain THOMAS ELLIOT, Thirlestane, Lauder.  
 WILLIAM I. ELLIOT, Middletoun, Stow.  
 ALEXANDER FORBES, Rettie, Banff.  
 W. P. GILMOUR, Balmangan, Kirkcudbright.  
 GEORGE GRANT of Glenfarclas, Blacksboat.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES R. LUMSDEN of Arden, Dumbartonshire.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 JAMES PATON, Kirkness, Glencraig.  
 CHARLES W. RALSTON, Holmhill, Thornhill, Dumfriesshire.  
 GAVIN RALSTON, Glamis House, Glamis.  
 J. P. ROSS-TAYLOR, Mungoswalls, Duns.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 T. MERCER SHARP, Bardrill, Blackford.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 WILLIAM M'NAIR SNADDEN of The Coldoch, Blair Drummond, Stirling.  
 A. A. HAGART SPEIRS of Elderslie, Houston House, Renfrewshire.  
 Major S. STRANG STEEL of Philiphaugh, Selkirk.  
 THOMAS TEMPLETON, Sandyknowe, Kelso.  
 I. G. WILSON, Carbeth Home Farm, Balfroon Station.  
 JAMES WITHER, Awhirk, Stranraer.  
 The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary, *ex officio*.  
 J. F. TOCHER, D.Sc., LL.D., F.I.C., 41½ Union Street, Aberdeen, Chemist, *ex officio*.  
 A. E. CAMERON, M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh, Consulting Entomologist, *ex officio*.

## 7. GENERAL PURPOSES.

- J. P. ROSS-TAYLOR, Mungoswalls, Duns, Chairman of Board of Directors, *Convener*.  
 Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.  
 THOMAS CLARK, Muirtons, Perth.  
 JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.  
 Captain THOMAS ELLIOT, Thirlestane, Lauder.  
 WILLIAM I. ELLIOT, Middletoun, Stow.  
 J. E. KERR of Harviestoun, Dollar.  
 JAMES M'LAREN, Cornton, Bridge of Allan.  
 WILLIAM MEIKLEM, Bennoch Park, Kirkcaldy.  
 ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.  
 JAMES PATON, Kirkness, Glencraig.  
 JOHN W. PRENTICE, Craigrie Farm, Clackmannan.  
 The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.  
 Major ROBERT W. SHARPE of The Park, Earlston.  
 G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.  
 THOMAS TEMPLETON, Sandyknowe, Kelso.  
 The EARL OF HOME, K.T., The Hirsell, Coldstream, Treasurer, *ex officio*.  
 Colonel F. J. CARRUTHERS of Dormont, Lockerbie, Honorary Secretary, *ex officio*.

### 8. EDUCATION.

Colonel F J CARRUTHERS of Dormont, Lockerbie, Honorary Secretary,  
*Convener*

JAMES M'LAREN, Cornton, Bridge of Allan

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire

J P ROSS-TAYLOR, Mungoswalls, Duns, Chairman of Board of Directors

T G WILSON, Carbeth Home Farm, Balfron Station

JOHN STIRTON, 8 Eglinton Crescent, Edinburgh, Secretary.

### 9. OFFICE-BEARERS.

*Constitution* (1) The four Ordinary Directors for the Division in which the Show for the year is to be held (with the exception of one retiring next year), (2) one Ordinary Director from each of the other Show Divisions, and (3) the Chairman of the Board, Treasurer and Hon Secretary, *ex officio*

<i>Dumfries</i>	{ CHARLES W RALSTON, Holmhill, 1 hornhill, Dumfriesshire JAMES WITHER, Awhirk, Stranraer
<i>Edinburgh</i>	{ WILLIAM MONTGOMERY, North Milton, Kirkcudbright Major R F BREBNER, The Leuchold, Dalmeny House, Edinburgh
<i>Inverness</i>	FRANCIS W WALKER of Leys, Leys Castle, Inverness
<i>Perth</i>	JAMES PATON, Kirkness, Glenraig.
<i>Glasgow</i>	ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanark- shire,
<i>Aberdeen</i>	Colonel ROBERT W WALKER, Culter Lodge, Milltimber, Aber- deenshire
<i>Borders</i>	Major ROBERT W SHARPE of The Park, Earlston
<i>Stirling</i>	JAMES R LUMSDEN of Arden, Dumbartonshire
	J P ROSS-TAYLOR, Mungoswalls, Duns, Chairman of Board of Directors, <i>ex officio</i>
	The EARL OF HOME, KT, The Hirsell, Coldstream, Treasurer, <i>ex officio</i>
	Colonel F J CARRUTHERS of Dormont, Lockerbie Honorary Secretary, <i>ex officio</i>

## REPRESENTATIVES ON OTHER BODIES.

National Agricultural Examination Board and National  
Dairy Examination Board.

Colonel F J CARRUTHERS of Dormont, Lockerbie

JAMES M'LAREN, Cornton, Bridge of Allan

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire

J P ROSS-TAYLOR, Mungoswalls, Duns

T G WILSON Carbeth Home Farm, Balfron Station

JOHN STIRTON, 8 Eglinton Crescent, Edinburgh

Edinburgh and East of Scotland College of Agriculture.

JOHN STIRTON, *Secretary*, Highland and Agricultural Society of Scotland,  
8 Eglinton Crescent, Edinburgh.

**West of Scotland Agricultural College.**

WILLIAM BROWN, Craigton, Bishopton.

**Aberdeen and North of Scotland College of Agriculture.**

J. F. TOCHER, D.Sc., LL.D., F.I.C., 41½ Union Street, Aberdeen.

**Royal (Dick) Veterinary College.**

JOHN E. B. COWPER, Gogar House, Corstorphine, Edinburgh.

**Glasgow Veterinary College.**

ALEXANDER MURDOCH, East Hallside, Cambuslang, Lanarkshire.

**Scottish Milk Records Association.**

W. P. GILMOUR, Balmangan, Kirkcudbright.

JOHN W. PRENTICE, Craigie Farm, Clackmannan.

JAMES WITHER, Awhirk, Stranraer.

**National Trust for Scotland.**

The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.

**Royal Scottish Agricultural Benevolent Institution.**

J. P. ROSS-TAYLOR, Mungoswalls, Duns.

**Association for the Preservation of Rural Scotland.**

The Hon. WALTER T. H. SCOTT, Master of Polwarth, Harden, Hawick.

**SCOTTISH PLANT REGISTRATION STATION.****Standing Committee of Management.**

Major R. F. BREBNER, The Leuchold, Dalmeny House, Edinburgh.

G. BERTRAM SHIELDS, 13 Moray Place, Edinburgh.

JAMES WITHER, Awhirk, Stranraer.

*Appointed for  
5 years from 1st  
January 1936.*

**MEETINGS.**

**General Meetings.**—By the Charter the Society must hold two General Meetings each year, and, under ordinary circumstances, they are held in the months of January and June, for the election of Members and other business. Twenty a quorum.

By a resolution of the General Meeting held on 15th January 1879, a General Meeting of Members is held in the Showyard on the occasion of the Annual Show. In 1937 it will be held at Alloa, on the Wednesday of the Show, at an hour to be announced in the Programme of the Show.

With reference to motions at General Meetings, Bye-Law No. 19 provides that—"At General Meetings of the Society no motion or proposal (except of mere form or courtesy) shall be submitted or entertained for immediate decision unless notice thereof has been given two weeks previously to the Board of Directors, without prejudice, however, to the competency of a motion or proposal, of which due notice has not been given, being remitted to the Directors for consideration, and thereafter being disposed of at a future General Meeting."

**Directors' Meetings.**—The Board of Directors meet (except when otherwise arranged) on the first Wednesday of each month from November to June inclusive, at 1.30 p.m., and occasionally as business may require, on a requisition by three Directors to the Secretary, or on intimation by him. Seven a quorum.

**Committee Meetings.**—Meetings of the various Committees are held as required.

**Nomination of Directors.**—Meetings of Members, for the purpose of nominating Directors to represent the Show Divisions on the Board for the year 1938-1939, will be held at the places and on the days after-mentioned :—

DIVISION		
1. <i>Edinburgh.</i>	Market Buildings, Gorgie, Edinburgh . . .	Wed., 26th Jan. 1938, at 1.
2. <i>Glasgow.</i>	Central Station Hotel, Glasgow . . .	Wed., 9th Feb. 1938, at 1.
3. <i>Stirling.</i>	Golden Lion Hotel, Stirling . . .	Thur., 10th Feb. 1938, at 1.30.
4. <i>Perth.</i>	County Buildings, Cupar . . .	Tues., 15th Feb. 1938, at 2.
(The Meeting will be held in 1939 at Cupar; in 1940 and 1941 at Perth.)		
5. <i>Borders.</i>	Railway Hotel, St Boswells . . .	Thur., 17th Feb. 1938, at 2.
6. <i>Inverness.</i>	Station Hotel, Inverness . . .	Tues., 22nd Feb. 1938, at 2.
7. <i>Aberdeen.</i>	Imperial Hotel, Aberdeen . . .	Fri., 25th Feb. 1938, at 2.30.
8. <i>Dumfries.</i>	King's Arms Hotel, Dumfries . . .	Wed., 9th Mar. 1938, at 2.

The nomination of a Proprietor or other Member paying the higher subscription must be made in the 3rd, 6th, 7th and 8th Divisions; and the nomination of a Tenant-Farmer or other Member paying the lower subscription in the 1st, 2nd, 4th and 5th Divisions.

Retiring Directors are not eligible for re-election until after the lapse of at least one year.

## GENERAL SHOW

The 106th Annual Show of Stock, Implements and Machinery, &c., will be held at Alloa on 22nd, 23rd, 24th and 25th June 1937. For closing dates for Entries, Premiums offered, &c., see 'Regulations and Prize List' herein.

## EXAMINATIONS.

**Agriculture.**—The Examination in 1937 for the National Diploma in Agriculture will be held at Leeds University on 14th April 1937 and following days. Applications close on 20th February 1937.

**Dairying.**—The Examination in 1937 (Scottish Centre) for the National Diploma in Dairying will be held at the Dairy School.

**Auchincruive, Ayr:** *Written*—On 8th, 9th and 10th September 1937.  
*Oral and Practical*—On 20th September 1937 and following days.  
Applications close on 31st July 1937.

**Forestry.**—The Final Examination for the Society's First and Second-Class Certificates in Forestry was held in 1935.

In view of the institution of Examinations for Certificates and Diplomas in Forestry by the Royal Scottish Forestry Society, and by arrangement with that Society, the Board of Directors of the Highland and Agricultural Society of Scotland resolved in 1935 to cease holding further Examinations for the First and Second-Class Certificates, and that, in future, the granting of Certificates and Diplomas be left in the hands of the Royal Scottish Forestry Society.

All communications in connection with Examinations in Forestry should now be addressed to the Secretary, Royal Scottish Forestry Society, 8 Rutland Square, Edinburgh 1.



## NATIONAL DIPLOMA IN AGRICULTURE

By a Supplementary Charter under the Great Seal, granted in 1856, the Society is empowered to grant Diplomas.

From 1858 to 1899 the Society held an annual Examination for Certificate and Diploma in Agriculture. In 1872 the Free Life Membership of the Society was granted to winners of the Diploma. In 1884 permission was given to holders of the Diploma to append the letters F.H.A.S. to their names.

In 1898 it was resolved by the Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland to discontinue the independent Examinations in Agriculture held by the two Societies, and to institute in their stead a Joint-Examination for a NATIONAL DIPLOMA IN AGRICULTURE (N.D.A.) This Examination is now conducted under the management of "The National Agricultural Examination Board" appointed by the two Societies.

## REGULATIONS FOR EXAMINATION IN THE SCIENCE AND PRACTICE OF AGRICULTURE

1. The Societies may hold conjointly, under the management of the National Agricultural Examination Board appointed by them, an Annual Examination in the Science and Practice, of Agriculture, at a convenient centre.

2. Candidates who pass the Examination will receive the National Diploma in Agriculture—the Diploma to be distinguished shortly by the letters "N.D.A."

3. The Examination will be conducted by means of written papers and oral examinations.

4. In order to be eligible to sit for the Board's Examination in Agriculture, a candidate must—

(a) Present a certificate from a recognised Agricultural College that his attainments in the subjects of *General Botany, Geology, General Chemistry, Physics, and Mechanics*, as attested by class and other examinations, are, in the opinion of the authorities of the College, such as to justify his admission to the Board's Examination; or

(b) Produce evidence that he has passed the 1st B.Sc. or the Intermediate Examination in Science of a British University; or

(c) Present a School Certificate awarded by a British University Examination Board, and produce evidence that he has continued his study of science for at least a year and has obtained a certificate in Physics, Chemistry and Botany at the Higher Certificate Examination of a British University Examination Board; or

(d) Present a Leaving Certificate in Science (including Chemistry and Botany) of the Scottish Education Department.

5. In the case of students who satisfy the Board that they have not had the facilities for obtaining the foregoing certificates, the Board will be prepared to consider evidence of equivalent attainment. [Applications under this rule must be lodged *three months* before the date of the annual examination.]

6. *Before sitting for the PRACTICAL AGRICULTURE and FARM MACHINERY AND IMPLEMENTS papers, all candidates must produce evidence of possessing a practical knowledge of Agriculture obtained by residence on a farm in the British Isles for a period or periods (not more than two) covering a complete year of farming operations.*

7. Candidates will have the option of taking the whole of the following nine papers at one time, or of sitting for a group of any three, four, or five in the first year and the remaining subjects (at one examination) within the next two years:—

SUBJECT.	Maximum Marks.	Pass Marks.
1. Practical Agriculture (First Paper) . . .	400	240
2. Practical Agriculture (Second Paper) . . .	400	240
3. Farm Machinery and Implements . . .	300	150
4. Land Surveying and Farm Buildings . . .	100	50
5. Agricultural Chemistry . . .	200	100
6. Agricultural Botany . . .	200	100
7. Agricultural Book-keeping . . .	200	100
8. Agricultural Zoology . . .	100	50
9. Veterinary Science and Hygiene . . .	200	100
	<hr/> 2100	<hr/> 1130

NOTE.—Candidates taking the Examination in two groups of subjects are recommended to take Agricultural Chemistry and Agricultural Botany in the first group.

8. A candidate who obtains not less than three-fourths (1575) of the aggregate maximum marks (2100) in the entire Examination will receive the Diploma with Honours, provided that he obtains not less than three-fourths (600) of the maximum marks (800) in the two Practical Agriculture papers.

9. Candidates electing to take the entire Examination at one time and failing in not more than three subjects may appear for these subjects in the following year. Failure in more than three subjects will be regarded as failure in the whole Examination.

10. In the case of candidates electing to take the Examination in two groups—

(a) A candidate appearing for a group of *three* subjects and failing in a single subject may, *in the case of a first group*, appear for that subject along with the second group, or, *in the case of a second group*, in the following year. Failure in more than one subject will be regarded as failure in the group.

(b) A candidate appearing for a group of *four* or more subjects and failing in not more than two subjects may, *in the case of a first group*, appear for these subjects along with the second group, or, *in the case of a second group*, in the following year. Failure in more than two subjects will be regarded as failure in the group.

11. Non-returnable fees must be paid by candidates as follows :—

Entire Examination	.	.	.	Six guineas.
Group of Subjects	.	.	.	Three guineas.
Reappearance for any Subjects	.			10/6 per Subject.

12. The Board reserve the right to postpone, abandon, or in any way, or at any time, modify an Examination, and also to decline at any stage to admit any particular candidate to the Examination.

The Examination will take place at Leeds University on WEDNESDAY, 14th APRIL 1937, and following days.

Forms of application for permission to sit at the Examination may be obtained from "The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C. 1," or from "The Secretary, Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12," and must be returned duly filled up not later than SATURDAY, 20th FEBRUARY 1937, when the Entries will close.

## SYLLABUS OF SUBJECTS OF EXAMINATION

### PRACTICAL AGRICULTURE.

#### 1.—FIRST PAPER.

1. *British Farming*.—Arable, stock-raising, dairying—Approximate areas covered by the different systems—Typical examples of each—Area in Great Britain under chief crops—Numbers of live stock—The recent history of agriculture—Short summary of agricultural returns.

2. *Climate*.—The effect of climate on farming practice—Rainfall—Temperature—Prevailing winds—Weather forecasts.

3. *Soils*.—The influence of geological formations on the systems of farming—Classification of soils—Character and composition—Suitability for cultivation. Reclamation—Drainage—Irrigation—Warping—Application of lime and marl—Bare fallows—Tillage—Subsoiling—Deep and thorough cultivation.

4. *Manures*.—The manures of the farm—The treatment of farm-yard manure—The disposal of liquid manure and sewage—General manures—Special manures—Field trials of manures—The application of manures—Period of application and amounts used per acre—Unexhausted value of manures and feeding-stuffs.

5. *Crops*.—Wheat, barley, oats, rye, beans, peas, potatoes, turnips, swedes, mangolds, sugar beet, forage plants, hops, and other crops—Their adaptation to different soils and climates—Varieties—Selection of seed—Judging seeds—Cultivation, weeds and parasitic plants, best methods of prevention and eradication—Harvesting. Storing—Cost of production—Improvement of crops by selection and hybridising—Field trials—Methods which the farmer may adopt—Selection to resist disease—The principles of rotations—Rotations suitable for different soils and climates—Rotations and the maintenance of fertility—Green manuring—Leguminous crops in rotation—Catch crops—The advantages and disadvantages of rotations—Specialised farming—Management of Orchards.

## 2.—SECOND PAPER.

6. *Live Stock*.—The different breeds of British live stock—Their origin, characteristics, and comparative merits—Suitability for different districts—Breeding—General principles—Selection—Mating—Crossing—Rearing and general management—Breeding and rearing of horses, cattle, sheep, pigs, and poultry. Rearing colts and raising store stock—The foods of the farm—Their composition and suitability for different classes of stock—Purchased foods—Composition and special value—Rations for different kinds and ages of stock—Cost of producing beef, mutton, pork, and milk—Cost of feeding farm horses.

7. *The disposal of Crops, Produce, and Stock*.—Marketing grain and other crops—Sale of stock—Live weight—Dead weight.

8. *Milk*.—The production and treatment of milk—The manufacture of cheese, butter, &c.—The utilisation of by-products.

9. *Farming Capital*.—Calculations of the stocking and working of arable, stock, and dairy farms—Farm valuations—Rent and taxes.

10. *Labour*.—Organisation of labour—piece-work, time-work—labour costings.

11. *Renting a Farm*.—Indications of condition, productive power, and stock-carrying capacity—Leases—Conditions of occupancy.

N.B.—*It is essential that a candidate know his subject practically, and that he satisfy the Examiner of his familiarity with farm work and management.*

## 3.—FARM MACHINERY AND IMPLEMENTS.

1. *Power*.—The principle of action, construction, method of working, also care and management of steam engines and boilers, gas, oil and petrol engines and agricultural tractors. Cost and working expenses in connection with the above. Estimation of the brake horse-power of engines. Power derived from water. Measure-

ment of the quantity of water flowing in a stream. General arrangement of water-power plants. Water-wheels. Turbines. Pumps—principle of action and construction. Flow of water through pipes. Hydraulic ram. Windmills.

2. *Agricultural Implements and Machinery.*—The mode of action and the general principles involved in the construction and working of farm implements and machinery. Arrangement of machinery with respect to the power plant. Pulleys and belting. Shafting and bearings. Lubrication. Lifting appliances. Strength and care of chains. Concrete and its use in the construction of simple foundations for engines and machines.

3. *Implements of Cultivation.*—Ploughs—Cultivators—Grubbers—Harrow—Drills. Manure Distributors. Seeding and planting implements.

4. *Implements of Harvesting.*—Mowing and Reaping machines—Rakes—Teddies—Elevators—Potato raisers.

5. *Implements of Transit.*—Carts, waggons, rick lifters, tractors.

6. *Threshing and Food-preparing Machinery.*—Threshing machines, stationary and portable—Screen Winnowers—Hummelers, Chaff cutters—Pulpers—Cake breakers.

7. *Dairy Appliances.*—Milking machines—Cream separators—Churns and other butter-working appliances—Milk delivery cans—Cheese-making utensils—Vats and presses.

N.B.—*Candidates are expected to have had some experience with agricultural machinery and implements under actual working conditions, and to be capable of illustrating their answers, when necessary, by intelligible sketches or diagrams.*

#### 4.—LAND SURVEYING AND FARM BUILDINGS.

1. The use and adjustment of instruments employed in Surveying and Levelling other than the Theodolite.

2. Land surveying by chain, Plotting from field book, and determination of areas surveyed. The simpler "field problems."

3. Levelling and plotting from field book.

4. A knowledge of the various classes of maps published by the Ordnance Survey Department and their Scales.

5. *Roads and Fences.*—The construction and maintenance of farm roads, fences, and ditches.

6. *Land Drainage.*—Methods of draining; mole and pipe drains; cost of construction and maintenance.

7. *Buildings.*—Buildings required on different classes of farms—Economical arrangement of farm buildings—Materials—Construction—Ventilation—Drainage—Water supply—Dimensions of dairy, stables, cowsheds, yard, courts, and piggeries—Accommodation for power—Implement, machinery, and cart sheds—Hay and grain sheds—Shelter sheds—Storage of manure.

N.B.—*Each candidate should have with him at the Examination a pair of compasses, scales of equal parts, including scales of one chain to the inch, 4 feet to the inch, 8 feet to the inch, and the scale fitting the Ordnance Map,  $\frac{1}{2500}$  or 25·344 inches to the mile, a small protractor, a set-square, and a straight-edge about 18 inches in length.*

### 5.—AGRICULTURAL CHEMISTRY.

1. *The Atmosphere.*—Its composition and relations to plant and animal life.

2. *Water.*—Rain water—Soil water and drainage—Drinking water—Sewage and irrigation.

3. *The Soil.*—Origin, formation, and classification of soils—Sampling—Analysis—Composition of soils—The chemical and physical properties of soils—The water and air of the soil—Biological changes in the soil—The soil in relation to plant growth—Fertility—Causes of infertility—Improvement of soils.

4. *Manures.*—Theories of manuring—Classification of manures—Origin, nature, and characteristics of manures—Manufacture of manures—Composition, analysis, adulteration, and valuation of manures—Farmyard manure and other natural manures—Green-manuring—Liming, marling, claying—Artificial manures, their origin and manufacture—Fertilisers and Feeding Stuffs Act—Sampling of manures.

5. *Poisons, Antiseptics, and Preservatives.*—General chemical composition and character of insecticides, fungicides, antiseptics, and preservatives used on the farm.

6. *Plants and Crops.*—Constituents of plants—Assimilation and nutrition of plants—Sources of the nitrogen and other constituents of plants—Germination—Action of enzymes—Composition and manurial requirements of farm crops—Food products derived from crops—Manuring experiments.

7. *Animals.*—Composition of animal body—Animal nutrition—Digestion—Assimilation, metabolism, respiration, and excretion.

8. *Foods and Feeding.*—Constituents of foods—Origin, nature, and composition of chief feeding-stuffs—Sampling, analysis, and adulteration of foods—Nutritive value and digestibility of food—Functions of chief food constituents—Energy values—Vitamins—Relation of foods to the production of work, meat, milk, and manure—Manurial residues of foods.

9. *Dairy Chemistry.*—The composition of milk, cream, butter, cheese, &c.—Conditions which influence the composition of milk and milk products—Action of ferments and enzymes on milk and milk products—Milk-testing—Analysis and adulteration of dairy products.

N.B.—Candidates who are in possession of *Laboratory Notes* are required to bring them to the Oral Examination in this subject.

### 6.—AGRICULTURAL BOTANY.

In addition to a *general knowledge* of the morphology, histology, and physiology of plants, candidates will be expected to possess a *detailed knowledge* of the following subjects:—

The classification of plants of importance in agriculture as shown by a detailed study of the genera, species, and botanical varieties of the British Crop Plants and Weeds included in the following families:—

Ranunculaceæ.	Umbelliferae.	Chenopodiaceæ.
Cruciferae.	Compositæ.	Polygonaceæ.
Caryophyllaceæ.	Solanaceæ.	Liliaceæ.
Leguminosæ.	Scrophulariaceæ.	Gramineæ.
Rosaceæ.	Labiatae.	

British grasses of agricultural importance : recognition of, at any stage of growth. Habitats of important species. Constitution of the grass flora of good meadows and pastures. Composition of seed mixtures for temporary and permanent leys on various soils. The effects of artificial manures on the flora of grass land.

The weeds of arable and grass land. Poisonous and parasitic weeds. Methods of distribution by seed and vegetatively : of eradication. Weeds as soil indicators. Recognition of the seeds of the common weeds, particularly those characteristically found in clover, grass, &c., seed.

The chief varieties of wheat, barley, oats, clovers, roots, and other farm crops : their suitability for various climatic and soil conditions. The identification of the more important types of cereals by means of their grain characters. Characteristics of good and bad samples of cereals.

Identification of materials used in feeding cakes and meals.

Plant-breeding. Principles of heredity in plants. Pure lines. Fluctuating variability. Selection.

Disease in plants. Diseases due to the effects of parasitic fungi. Resistance to disease : conditions affecting. Fungoid diseases scheduled from time to time by the Ministry of Agriculture and Fisheries.

Yeasts and fermentation.

The general outlines of bacteriology : nitrogen fixation, nitrification, and denitrification. Putrefaction and the bacteriology of milk, butter, and cheese.

N.B.—*Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.*

## 7.—AGRICULTURAL BOOK-KEEPING.

1. Advantages of book-keeping to the farmer. Difficulties and how they can be overcome. Objects of book-keeping.

2. General principles of book-keeping. Double-entry system. Description and use of various books. Ledger, journal, cash-book, petty cash-book, day-books, &c. Entering transactions ; posting ; trial balance ; closing the accounts. Single-entry system.

3. Special ledger accounts : Interest, depreciation, rent and rates, improvements, private and household expenses, profit and loss and capital ; partnership accounts.

4. Bank business. Opening a bank account. Use of cheques. Deposits and overdrafts.

5. General office work ; correspondence, order notes, invoices, rendering accounts, receipts, &c. Filing systems.

6. Farm valuations for book-keeping purposes. Dates for stock-taking and principles of valuation. The farm balance-sheet.

7. Systems of farm book-keeping. Conditions that determine the most suitable system. Advantages and drawbacks of each system.

8. Accounts for the owner-occupier. Treatment of rent. Incidence of rates and tithe in England and Scotland, and their treatment as between farm and estate accounts. Improvements and upkeep and the general principles relating to maintenance claims.

9. Cost accounting. General principles and methods. Advantages, objects, difficulties.

10. Interpretation of results from ordinary and from cost accounts. Precautions necessary. Use of accounts as a guide to efficient management.

11. Income Tax. How the farmer is assessed. Preparation of Income Tax return. Treatment of Income Tax in accounts.

## 8.—AGRICULTURAL ZOOLOGY.

The Examination is designed to test practical knowledge, and therefore Candidates will be expected to recognise the animals of agricultural importance referred to in the Syllabus.

### GENERAL.

A general knowledge of the characteristics of living animals and how they differ from plants.

One-celled animals, *e.g.*, Amoeba, and many-celled animals.

General outline of the classification of animals and the characters on which it is based.

Organic Evolution. Theories of Heredity.

### SPECIAL.

I. *Invertebrates*.—A. The Worm Parasites of Stock. Flat and Round Worms. Structure and Life History, for example, of Liver-fluke, Tapeworm, Ascaris. The mode of life and life history of the chief worm enemies of the domesticated animals. Preventive and remedial measures.

B. The Arachnid enemies of Stock: Mange or Scab Mites, Demodex Mites, Ticks. External structure and life history. Control measures.

C. The Insect enemies of Stock: (a) External parasites, *e.g.*, gadflies, warble flies, blue-bottles, green-bottles, stable fly, ked, lice. (b) Internal parasites, *e.g.*, bot and warble flies.

D. Insects injurious to Crops: Structure and classification of insects. Mode of life and life history of the chief insect pests of agricultural crops.\* Control, preventive and remedial measures—natural control; artificial control (Insecticides).

\* The chief pests are detailed in Pamphlets issued by the Ministry of Agriculture and Fisheries.

E. Other invertebrates of agricultural importance, *e.g.*, earth-worms, eelworms, slugs and snails, centipedes and millepedes, gall mites.

II. *Vertebrates*.—Birds: the commoner birds of farm importance, their recognition and an estimate of their work.

Mammals: Outstanding characters for recognition, and the economic importance of:—

1. Ungulata or Hoofed Mammals, *e.g.*, horse, pig, cattle, sheep, deer.
2. Rodentia or Gnawing Mammals, *e.g.*, hares, rabbits, rats, mice, voles, squirrels.
3. Insectivora, *e.g.*, mole, hedgehog, shrew.
4. Carnivora, *e.g.*, dog, fox, polecat, stoat, weasel, badger.

N.B.—Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.



## 9.—VETERINARY SCIENCE AND HYGIENE.

1. Elementary anatomy and physiology of the horse, ox, sheep, and pig, and their relation to unsoundness and disease.
2. The general principles of breeding—including the physiology of reproduction, the laws of heredity, the periods of gestation, and the signs of pregnancy in the mare, cow, ewe, and sow.
3. Dentition as a means of determining the age of horses, cattle, sheep, and swine.
4. The management of farm stock in health and disease.

N.B.—*Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.*

## WINNERS OF DIPLOMA IN 1936.

*Diploma with Honours.*

- 1st. EDWARD DAWSON, University of Leeds.  
 2nd WILLIAM JOHN CUMBER, Jun., West of Scotland Agricultural College, Glasgow.

*Diploma.*

- CHARLES HENRY AITCHISON, University of Glasgow & West of Scotland Agricultural College.  
 ROWLAND TUDOR BATHER, South Eastern Agricultural College, Wye, Kent.  
 ALFRED JAMES GRIFFIN BEECHEY, Royal Agricultural College, Cirencester.  
 WILFRED HENRY GEORGE BLACKER, University of Reading.  
 HAROLD BROADBERRY, Midland Agricultural College, Sutton Bonington, Loughborough.  
 STANLEY CULPIN, East Anglian Institute of Agriculture, Chelmsford.  
 ROGER PROBERT DAVIES, University College of Wales, Aberystwyth.  
 ROBERT ARCHIBALD DYKE, Harper Adams Agricultural College, Newport, Shropshire.  
 ALAN SCOTT GAGE, West of Scotland Agricultural College, Glasgow.  
 LESLIE HAMMOND HEAP, Harper Adams Agricultural College, Newport, Shropshire.  
 JAMES WILLIAM HOUGHTON, Midland Agricultural College, Sutton Bonington, Loughborough.  
 WILLIAM JOHNSTONE, University of Glasgow & West of Scotland Agricultural College.  
 KENNETH WALTER KEMP, East Anglian Institute of Agriculture, Chelmsford.  
 IVOR ERNEST KETTERINGHAM, Midland Agricultural College, Sutton Bonington, Loughborough.

- JOHN RICHARD KEYWORTH, Royal Agricultural College, Cirencester.  
EGERTON MARTIN KIDNER, University of Reading.  
GILBERT SINCLAIR LAWRIE, Edinburgh & East of Scotland College of Agriculture.  
JOHN LOCKHART, West of Scotland Agricultural College, Glasgow.  
JESSE CAMPBELL MITCHELL M'CALL, West of Scotland Agricultural College, Glasgow.  
ALASTAIR MACDONALD, Edinburgh & East of Scotland College of Agriculture.  
PARLAN JAMES MACFARLAN, University of Glasgow & West of Scotland Agricultural College.  
JAMES M'GIBBON, University of Glasgow & West of Scotland Agricultural College.  
JOHN COLLINGTON MATTHEWS, Midland Agricultural College, Sutton Bonington, Loughborough.  
MICHAEL FRANCIS MERCHANT, East Anglian Institute of Agriculture, Chelmsford.  
THOMAS MITCHELL MITCHELL, West of Scotland Agricultural College, Glasgow.  
JOHN ALFRED NEWRICK, University of Leeds.  
JOHN O'NEILL, University of Glasgow & West of Scotland Agricultural College.  
GEORGE ORD, Armstrong College, Newcastle-upon-Tyne.  
JAMES PATERSON, University of Glasgow & West of Scotland Agricultural College.  
WILLIAM EDWARD RICHARDS, University of Reading.  
IORWERTH ROBERTS, University College of Wales, Aberystwyth.  
WESLEY SCRAGG, Harper Adams Agricultural College, Newport, Shropshire.  
ERNEST JAMES SCRIVEN, Seale Hayne Agricultural College, Newton Abbot, Devon.  
ALEXANDER MORTON SERVICE, West of Scotland Agricultural College, Glasgow.  
JAMES FREDERICK SHAW, Midland Agricultural College, Sutton Bonington, Loughborough.  
GEOFFREY HARGREAVES SMITH, Armstrong College, Newcastle-upon-Tyne.  
WALTER RIDDELL SMITH, Armstrong College, Newcastle-upon-Tyne.  
WILLIAM BUCKLAND SMITH, East Anglian Institute of Agriculture, Chelmsford.  
HERBERT GERALD STABLEFORD, Midland Agricultural College, Sutton Bonington, Loughborough.  
NORMAN SLADE STRICKLAND, South Eastern Agricultural College, Wye, Kent.  
FORD GIBSON STURBOCK, West of Scotland Agricultural College, Glasgow.  
HAROLD TEMPERTON, Armstrong College, Newcastle-upon-Tyne.  
THOMAS HENRY THOMPSON, Armstrong College, Newcastle-upon-Tyne.  
NORMAN TURNER, University of Glasgow & West of Scotland Agricultural College.  
JOHN CARSWELL WARNOCK, University of Glasgow & West of Scotland Agricultural College.

JOHN JOHNSTON SCOTT WEBSTER, Royal Agricultural College, Cirencester.

CHARLES TREVOR WILLIAMS, University College of Wales, Aberystwyth.

KENNETH PERCEVAL WILLIAMS, University College of Wales, Aberystwyth.

GEOFFREY WILLIAMSON, Armstrong College, Newcastle-upon-Tyne.

#### EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in AGRICULTURE, so far as available, may be had on application. Price 6d. per set.

Sets of N.D.A. Papers available are those for the years 1930-1936 inclusive.

## NATIONAL DIPLOMA IN DAIRYING

This Examination, instituted in 1897, is conducted by "The National Dairy Examination Board," appointed jointly by the Royal Agricultural Society of England, the Highland and Agricultural Society of Scotland, and the British Dairy Farmers' Association.

### REGULATIONS FOR EXAMINATION IN THE SCIENCE AND PRACTICE OF DAIRYING

1. The Societies may hold annually in England and in Scotland, under the management of the National Dairy Examination Board appointed by them, one or more examinations for the National Diploma in the Science and Practice of Dairying; the Diploma to be distinguished shortly by the letters 'N.D.D.'

2. The Examinations will be held on dates and at places from time to time appointed and duly announced.

3. Forms of Entry for the Examination in England may be obtained from 'The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C.1,' and must be returned to him duly filled up, with the entry fee, on or before Tuesday, 20th July 1937.

4. Forms of Entry for the Examination in Scotland may be obtained from 'The Secretary, Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12,' and must be returned to him duly filled up, with the entry fee, on or before Saturday, 31st July 1937.

5. Any candidate may enter for the Examination either in England or Scotland, but not in both, and a candidate who has once taken part in an Examination in England cannot enter for an Examination in Scotland, or *vice versa*. *An exception may be made in favour of a candidate reappearing under Regulation 11 (3) provided special application is made at the time of entry.*

6. As a preliminary to the acceptance of any application for permission to enter for the Examination, a candidate must produce:—

- (1) A certificate testifying that he or she has attended a Diploma Course in the subjects of the Examination covering two

*academic years* at an approved Dairy Training Institution and has satisfied the authorities of the Institution of his or her fitness for admission to the Examination. This period shall include six session months' instruction (consisting of not more than two periods) in practical dairy work.

- (2) Evidence that he or she has spent at least six months in not more than two periods on an approved Dairy farm and taken part in the work. This period must not run concurrently with the six months' practical training referred to in subsection 1.

*A Dairy Farm to be approved must have not fewer than fifteen cows kept in daily milking.*

7. A candidate who has already taken a Degree in Agriculture of a British University or a Diploma in Agriculture recognised by the National Dairy Examination Board, will be allowed to enter for the National Diploma in Dairying Examination after one year's training at an approved Dairy Training Institution, providing that such course includes at least six months' training in practical dairy work, and that he or she has worked for at least six months on an approved Dairy Farm.

8. In the Examination a candidate will be required to satisfy the Examiners by means of written papers, practical work, and *viva voce*, that he or she has :—

- (1) A general knowledge of the Management of a Dairy Farm, including the rearing and feeding of Dairy Stock, the candidate being required to satisfy the Examiners that he or she had had a thorough training and practical experience in all the details of Dairy work as pursued on a farm.
- (2) A thorough acquaintance, both practical and scientific, with everything connected with the management of a Dairy, and the manufacture of Butter and Cheese.
- (3) A general knowledge of Dairy Factory Management, Dairy Hygiene, Dairy Engineering, and Dairy Book-keeping.
- (4) Practical skill in Dairying, to be tested by the making of Butter and Cheese.

**NOTE.**—A candidate must be prepared to make any one of the following varieties of Hard Pressed Cheese, the Examiner in Cheese-making having the option of saying during the Examination what variety a candidate shall make :—

**AT THE ENGLISH CENTRE :** Cheddar, Cheshire, or Derby.

**AT THE SCOTTISH CENTRE :** Cheddar, Dunlop, or Cheshire.

9. Candidates will have the option of :—

- (a) Taking the whole Examination at one time ; or
- (b) Taking the Examination in two parts.

A candidate taking the Examination in two parts must take the following subjects at the first sitting: **DAIRY FARMING, DAIRY HYGIENE, PRINCIPLES OF DAIRYING, DAIRY FACTORY MANAGEMENT**

AND DAIRY ENGINEERING, PRACTICAL CHEESE-MAKING AND BUTTER-MAKING; the remaining three Papers, CHEMISTRY AND PHYSICS, DAIRY BACTERIOLOGY, and DAIRY BOOK-KEEPING, to be taken at the Examination in the following year.

10. The maximum marks obtainable and the marks required for a pass in each subject are as follow :—

WRITTEN EXAMINATION—	Max.	Pass.
Dairy Farming . . . . .	150	90
Dairy Hygiene . . . . .	100	60
Dairying—		
(a) Principles of Dairying . . . . .	150	90
(b) Dairy Factory Management and Dairy Engineering . . . . .	100	50
Chemistry—		
(a) General Chemistry and Physics. }	100	60
(b) Dairy Chemistry. }		
Dairy Bacteriology . . . . .	100	60
Dairy Book-keeping . . . . .	100	50
PRACTICAL EXAMINATION—		
Hard-pressed Cheese-making . . . . .	200	150
Blue-veined Cheese-making . . . . .	100	75
Soft Cheese-making . . . . .	100	75
Butter-making . . . . .	200	150
	1400	910

Honours will be awarded to candidates obtaining an aggregate of 80 per cent (1120) of the maximum marks (1400) in the Examination, provided that they also obtain at least 80 per cent (400) of the maximum marks (500) in the Dairy Farming, Hygiene, and Dairying papers.

11. A candidate taking the whole Examination at one time :—

- (1) who fails in any part of the practical examination shall fail in the whole examination.
- (2) who fails in four or more subjects of the written examination shall fail in the whole examination.
- (3) who, having passed in the practical examination, fails in not more than three subjects of the written examination may, at the discretion of the Board, appear for those subjects in the following year. The Board may in certain circumstances require evidence of further study in these subjects.

12. A candidate taking the Examination in two parts, and failing in a *single subject* in the first part of the Examination, may, at the discretion of the Board, appear for that subject along with the second part; or, in the case of a *single subject* of the second part, in the following year. The Board may in certain circumstances require evidence of further study in that subject.

Failure in more than one subject will be regarded as failure in that part of the Examination. Failure in any part of the Practical Examination will entail complete failure.

## 13. The entrance fees will be as follow :—

For the whole Examination taken at one time . £3 3 0

For the Examination taken in two parts :

First part . . . . . 3 3 0

Second part . . . . . 1 1 0

For reappearance, 10s. 6d. each subject.

14. The Board reserve the right to postpone, to abandon, or in any way or at any time to modify an Examination, and also to decline at any stage to admit any particular candidate to the Examination.

## DATES OF EXAMINATIONS.

SCOTLAND.—At the Dairy School for Scotland, Auchincruive, Ayr.

WRITTEN—WEDNESDAY, THURSDAY, and FRIDAY, 8th, 9th, and 10th September 1937. ORAL AND PRACTICAL—MONDAY, 20th September 1937, and following days. Last date for receiving applications, SATURDAY, 31st JULY 1937.

ENGLAND.—At the University and British Dairy Institute, Reading.

WEDNESDAY, 8th September 1937, and following days. Last date for receiving Applications, TUESDAY, 20th JULY 1937.

## SYLLABUS OF SUBJECTS OF EXAMINATION.

## I.—DAIRY FARMING AND DAIRY HYGIENE.

## (a) DAIRY FARMING.

SOILS AND CROPS.—Types of Soils suitable for dairying. Rotations and systems of cropping. Cultivation, manuring and management of grain, root and forage crops used in dairying. Silage. Temporary and permanent pastures, haymaking.

PLANT PHYSIOLOGY.—Roots, shoots, flowers, fruit and seeds of agricultural plants.

DAIRY CATTLE.—Characteristics of different breeds. Relation of conformation and appearance to Milk Yield. Choice of dairy cattle in relation to climate and soil. The milk yields of the more important breeds, and suitability for the milk trade, cream, butter and cheese production.

The management of a Dairy Herd. Cattle breeding and grading up of dairy stock. Calf rearing and management of young stock.

Milk Recording. Systems, and utilisation of results. Details of official schemes.

FOODS AND FEEDING.—Summer and winter feeding of dairy cattle and young stock. Fodder crops and green forage. Roots. Ensilage. Compound feeds, meals, cakes. Preparation of food. The effect of feeding on milk and its products.

**PIG KEEPING.**—Characteristics of the more important breeds. The breeding, rearing and fattening of pigs. Production of pork and bacon.

**FARM MANAGEMENT.**—Systems of dairy farming. The selection, stocking and equipment of typical farms. Organisation of the farm and disposal of produce.

**DAIRY ECONOMICS.**—The Dairy Industry of Great Britain and its relationship to Agriculture. The relative importance of the various products. The retail milk trade. Markets, Dairy organisation and co-operation. Modern developments in the Dairy industry. Sources of imported Dairy Produce.

### (b) DAIRY HYGIENE.

**ANIMAL PHYSIOLOGY.**—General functions of the organs of the animal body. Breeding. Parturition. The structure of the udder and the process of milk secretion. Changes which food undergoes during digestion.

**VETERINARY SCIENCE.**—The more important diseases of dairy cattle and their treatment. The transmission and eradication of disease.

**MILK HYGIENE.**—Sanitary conditions. Suitability of water supply. Methods of milking and handling of milk. Regulations affecting milk production. Milk in relation to Public Health.

**FARM BUILDINGS.**—Situation, chief dimensions and construction of cow houses and dairy buildings. Housing for young stock and pigs. Air space and ventilation, drainage and water supply.

## II.—DAIRYING.

### (a) PRINCIPLES OF DAIRYING.

**MILK.**—Milking by hand and machinery. Importance of cleanliness. Cooling of milk. Prevention of contamination. Pasteurisation. Sterilisation. Keeping of milk. Milk testing and sampling. Use of Gerber and Babcock Testers. Interpretation of results. Legal standards. Legislation affecting milk production.

**CREAM.**—Separators and their management. Different systems of cream raising and ripening of cream. Changes during ripening. Natural and artificial ripening, and preparation and uses of starters. Preparation of cream for sale. Uses of preservatives. Clotted cream.

**BUTTER.**—Churns and butter-making appliances. Preparation of cream for churning. Washing and working butter. Butter milk. Packing and transmission of butter. Selection and keeping of butter. Salting. Use of preservatives. Characteristics of good butter and method of judging. Circumstances affecting the flavour, texture, colour and keeping qualities of butter. Potting butter for keeping. Causes of inferior butter.



**CHEESE.**—Principles of manufacture. Appliances for cheese-making. The making of the principal varieties of British, Colonial and Continental cheese from cream, whole milk and skim milk. Acidity of milk. Common tests for acidity. Uses of rennet and its substitutes. Whey. Ripening and storage of cheese. Packing and sale of cheese. Making of cream and other soft cheese. Defects in cheese and their causes. Judging cheese.

#### (b) DAIRY FACTORY MANAGEMENT AND DAIRY ENGINEERING.

**FACTORY PRACTICE.**—Milk depots and handling of factory milk. Systems of cooling and refrigeration. Pasteurisation. Factory butter and cheese-making. Milk Powders. Condensed milk. Frozen milk. Ice cream. Dried casein. Fermented milk. Lactose and whey-butter. Margarine manufacture. Equipment of milk depots, butter, cheese and dairy factories.

**FACTORY MANAGEMENT.**—Factory routine. Organisation of labour. Handling of milk on arrival at the factory. Methods of dealing with the milk. Milk contracts. Dairy factory legislation.

**DAIRY APPLIANCES AND MACHINERY.**—Appliances used in the production and handling of milk, butter and cheese. Care and management of engines and boilers, dairy factory machinery, refrigerating machinery.

**BUILDINGS.**—Situation, construction and drainage of creameries, milk depots and dairy factories.

### III.—CHEMISTRY.

#### (a) GENERAL CHEMISTRY AND PHYSICS.

**CHEMISTRY.**—Elements, compounds and mixtures. Chemical symbols, formulæ and equations. Acids, bases, salts: their distinctive properties. Acidity and alkalinity; their quantitative estimation. The Atmosphere: its constituents and impurities; influence on dairying operations. Water: its constitution; pure and natural waters; impurities in water and whence derived. Importance of a good water supply in dairying. General knowledge of elementary chemistry. Oxygen; hydrogen; carbon; nitrogen; phosphorus and sulphur; common metals; common acids; compounds of potassium, sodium, ammonium, calcium.

Elementary organic chemistry; sugar, milk sugar, starch, alcohol, acetic acid, formaldehyde, butyric acid, lactic acid, glycerine, saponification of fats; albumen, casein, pepsin.

**PHYSICS.**—The different forms of matter; solid, liquid, gaseous. Specific gravity and instruments for determining it. Temperature and methods of measuring it. Expansion; thermometric scales. Influence of temperature in dairy operations. Atmospheric pressure and its measurement. Hygrometry. Heat and its measurement; specific heat. Latent heat. Conduction. Convection. Radiation. Solution. Filtration. Distillation. Simple machines, such as levers, pulleys and light weighing machines.

**(b) DAIRY CHEMISTRY.**

**CHEMISTRY OF MILK.**—The nature, composition, properties and chemical constituents of milk. Microscopical appearances presented by milk. The influence of feeding. The changes which occur in the keeping of milk, and how produced. The natural and artificial souring of milk. Rennet, its nature and uses.

**MILK PRODUCTS.**—Physical and chemical changes involved in the making and keeping of butter and in the manufacture and ripening of cheese. Separated milk. Condensed milk. Fermented milk. Synthetic milk. The use of preservatives.

**DAIRY ANALYSIS.**—Analytical methods, their theory and practice. A general knowledge of the methods employed in the chemical analysis of milk, butter and cheese. Adulteration of milk, cream, butter and cheese, the ways in which adulteration is practised, the changes in composition thereby produced, and a general knowledge of the methods employed in detecting the same.

**CHEMISTRY OF FEEDING.**—The principal constituents of food materials and the functions they severally fulfil. The influence of food constituents on milk production. Assimilation and digestion. The manurial value of foods. Milk and milk products as foods.

*N.B.—Candidates are required to bring to the Oral Examination their Laboratory notebooks in sections (a) and (b) of this subject certified by their teachers as being the record of their Laboratory work carried out during the course.*

**IV.—DAIRY BACTERIOLOGY.**

**GENERAL BACTERIOLOGY.**—Bacteria; their form, classification, growth and reproduction. The microscope and its use. Staining and microscopic examination of bacteria. Methods of isolation and cultivation. Preparation of culture media. Fermentations and chemical changes produced by bacteria. Enzymes and their action. Effects of heat, cold, sterilisation, pasteurisation, disinfectants and preservatives on bacteria and enzymes. Bacteriological examination of water supplies.

**BACTERIOLOGY OF MILK.**—The changes produced by bacteria in milk. Useful forms and their functions. Harmful forms and their effects. Coagulation, discoloration, taints, &c. Bacteriological and other standards in relation to the cleanliness of milk.

**MILK PRODUCTS.**—The bacteria concerned in the ripening of cream and butter-making. 'Starters,' their preparation and management. The ripening of hard, soft and blue-veined cheese. Bacteria injurious to milk products, including condensed and dried milk.

**DAIRY MYCOLOGY.**—Moulds and yeasts in dairy practice. Their form, classification, growth and relation to dairy products.

*N.B.—Candidates are required to bring to the Oral Examination in this subject their Laboratory notebooks certified by their teachers as being the record of their Laboratory work carried out during the course.*

### V.—DAIRY BOOK-KEEPING.

Reasons for keeping accounts on the farm and in the dairy factory.

General principles of double-entry book-keeping. Use of day-book, journal, ledger, cash-book, analysis cash-book, and petty-cash book. Preparation of profit and loss account, capital account and balance sheet. Adjustments necessary for the owner-occupier.

Valuations. Basis of valuations for accounting purposes on the farm and in the dairy factory. Dates for stocktaking.

Methods of accounting suitable for dairy farms and factories. Forms for milk-retailing, cheese-making, and butter-making.

Preparation of a cost account for milk production.

Interpretation and use of accounting results, with special reference to their practical application.

Opening a Bank account. Cheques, deposits, and overdrafts.

Assessment of the Farmer for Income Tax purposes.

### VI.—PRACTICAL SKILL IN DAIRY WORK.

Candidates must be prepared—(1) to produce before the Examination a satisfactory certificate of proficiency in the milking of cows, signed by a practical Dairy Farmer, and to satisfy the Examiners by a practical test, if so required; (2) to churn and make into Butter a measured quantity of Cream; and (3) to make one Cheese of each of the following varieties: (1) Hard-pressed, of not less than 30 lb. (see Note to Reg. 8 (4)); (2) Veined or blue-moulded, of not less than 10 lb.; and (3) also to make one or other of the following Soft Cheeses: Cambridge, Camembert, Coulommier, or Pont l'Évêque.

### WINNERS OF DIPLOMA IN 1936.

#### SCOTTISH CENTRE.

##### *Diploma.*

MARY F. CAMPBELL, Main Street, Port Charlotte, Isle of Islay.

RONALD CRICHTON, 286 Wedderlea Drive, Cardonald, Glasgow.

ROBERT ARCHIBALD DYKE, Maseru, Basutoland, South Africa.

JANET R. L. ELLIOT, Thirlestane, Lauder, Berwickshire.

ALAN SCOTT GAGE, 8 Fife Road, Darlington.

JANET INGLIS GRAY, Langdales Farm, Greengairs, Airdrie.

ALLAN GREIG, Netherdysart, Montrose.

JANET BOWIE HOLMES, Gowanfield, Crieff.

ANDREW HOWIE, Crosslet Farm, Dumbarton.

FRANK A. HUNT, Sydney's Hope Estates, Warrenton, C.P., South Africa.

EDNA ELISE JACKSON, Bridgo End, Lorton, Cockermouth, Cumberland.

REGINALD KENNEY, 15 Mordaunt House, Larkhall Estate, London.

MAY ARMOUR LAMBIE, Nethor Pratis, Leven, Fife.

JOHN E. LEWIS, Spencer House, Lipson Road, Plymouth.

JOHN LOCKHART, 41 Inverkar Road, Ayr.

JESSE CAMPBELL MITCHELL M'CALL, 667 Stirling Road, Luggiebank, Cumbernauld Station.

PARLAN JAMES MACFARLAN, Faslane, Shandon, Dumbartonshire.

JAMES M'GIBBON, Laigh Bolerneck, Shandon, Dumbartonshire.

MARY MACLEAN, Wester New Forres, Forres.

M. A. M'VICAR, "Knockalva," Kilmichael-Glassary, Lochgilphead Argyll.

JOHN MAIDMENT, Scarf Farm, Nessfield, Ilkley, Yorkshire.

ANN S. MATHERS, Broadmuir, Cruden Bay, Aberdeenshire.

THOMAS MORGAN, Knaps, Longside, Aberdeenshire.

MARGARET J. ORR, Culzean Gardens, Maybole, Ayrshire.

JANE PATERSON, Milton-of-Tordarroch, Farr, Inverness.

CHARLES EDWARD LIONEL POWELL, Rindleford Mill House, Rindleford, Bridgnorth, Shropshire.

MANDAYAM CHAKRAVARTHY RANGASAMY, Imperial Dairy Institute, Wellington (Nilgiris), India.

MARGARET KEVAN RUSSELL, Balsier, Sorbie, Wigtownshire.

ISABELLA SANDERSON, Harelawside, Grantshouse, Berwickshire.

ARCHIBALD BOYLE SMART, Woodlands, Strathaven Road, East Kilbride.

JEANIE RANKIN SMITH, Middledyad, Galston, Ayrshire.

NANCY M. H. SONLEY, The Laurels, Barton-le-Street, Malton, Yorks.

JOHN STEVEN, Bilbster, Wick, Caithness.

JAMIE PATERSON STRUTHERS, Raehills, Whitemoss Road, East Kilbride.

THOMAS HENRY THOMPSON, High Cummersdale Farm, Carlisle.

BETTY H. TOD, Johmar, Innerleithen, Peeblesshire.

CHRISTINA C. TULLOCH, Ennisfirth, Northmavine, Shetland.

HARISH CHANDRA VERMA, 46 Cockburn Road, Bangalore, India.

MARION M. WALMSLEY, 17 Grange Road, Vicar's Cross, Chester.

KATHLEEN MARY MOFFATT WARD, Eastgate Farm, Eastgate, Co. Durham.

GEOFFREY WILLIAMSON, Dickinson Place, Allonby, Maryport, Cumberland.

#### ENGLISH CENTRE.

##### *Diploma with Honours.*

EGERTON MARTIN KIDNER, The University and British Dairy Institute, Reading.

##### *Diploma.*

ELINOR GERTRUDE AP THOMAS, The University and British Dairy Institute, Reading.

MARGARET ARMOREY, Lancs. C.C. Dairy Farm, Hutton, Preston.

MARGARET ARDERN BLORE, The University and British Dairy Institute, Reading.

WILFRED BODDY, Midland Agricultural College, Sutton Bonington, Loughborough.

WILLIAM BOND, Midland Agricultural College, Sutton Bonington, Loughborough.

CLARICE BURT, Midland Agricultural College, Sutton Bonington, Loughborough.

- SYDNEY GWYN DAVIES, University College of Wales, Aberystwyth.  
EDNA FOSTER, The University and British Dairy Institute, Reading.  
MARION GROVES, Lancs. C.C. Dairy School, Hutton, Preston.  
RUTH HAMBLY, The University and British Dairy Institute, Reading.  
AGNES HUNTER HOLMES, The University and British Dairy Institute,  
Reading.  
JOHN STEPHEN HOPKINS, The University and British Dairy Institute,  
Reading.  
THOMAS IDWAL JONES, University College of Wales, Aberystwyth.  
SAMUEL FRANK MARTIN, Midland Agricultural College, Sutton  
Bonington, Loughborough.  
EMMELINE ANNE MOORE, The University and British Dairy Institute,  
Reading.  
DENNIS IVAN MORTIMER, Midland Agricultural College, Sutton  
Bonington, Loughborough.  
AUDREY JOYCE PETERS, The University and British Dairy Institute,  
Reading.  
DILYS MARY PHILLIPS, The University and British Dairy Institute,  
Reading.  
JAMES BERTRAM PRESSWOOD, The University and British Dairy  
Institute, Reading.  
IDA GRACE PERCY ROBERTS, The University and British Dairy  
Institute, Reading.  
ELINOR MABEL CAPON ROPER, East Anglian Institute of Agriculture,  
Chelmsford.  
GRAHAM DENNIS SIMONS, University College of Wales, Aberystwyth.  
WILLIAM BUCKLAND SMITH, East Anglian Institute of Agriculture,  
Chelmsford.  
FREDERICK JOHN SOWERBY, Midland Agricultural College, Sutton  
Bonington, Loughborough.  
ELIZABETH TURNER, Midland Agricultural College, Sutton Bonington,  
Loughborough.  
JOHN MARTIN WILLCOCK, Seale Hayne Agricultural College, Newton  
Abbot, Devon.  
KENNETH PERCEVAL WILLIAMS, University College of Wales, Aberyst-  
wyth.  
GEORGE DOUGLAS WINTER, Seale Hayne Agricultural College, Newton  
Abbot, Devon.  
GLADYS MARY YEOMANS, Midland Agricultural College, Sutton  
Bonington, Loughborough.

#### EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in Dairying, so far as available, may be had on application. Price 6d. per set.

## CERTIFICATES IN FORESTRY

In 1870 the Society instituted an Examination in Forestry, and granted First and Second-Class Certificates respectively to such students as attained a certain standard of proficiency in the following subjects. Candidates were required to possess a thorough acquaintance with the theory and practice of Forestry, and a general knowledge of the following branches of study, so far as these applied to Forestry: (a) the elements of Forest Botany and Forest Zoology; (b) the elements of Meteorology and Geology; (c) Forest Engineering; and (d) Arithmetic and Book-keeping.

Holders of the First-Class Certificate were entitled to become free Life Members of the Society.

In view of the institution of Examinations for Certificates and Diplomas in Forestry by the Royal Scottish Forestry Society, and by arrangement with that Society, the Board of Directors of the Highland and Agricultural Society of Scotland resolved in 1935 to cease holding further Examinations for the First and Second-Class Certificates, and that, in future, the granting of Certificates and Diplomas be left in the hands of the Royal Scottish Forestry Society.

The list of students who obtained the Highland and Agricultural Society's Certificates in Forestry prior to 1899 appears in the 'Transactions' for the year 1899. A further list of those obtaining Certificates between 1899 and 1935 inclusive appears in the 'Transactions' for the year 1935. The total number of Certificates granted since the commencement of the Examination in 1870 was as follows: First-Class, 43; Second-Class, 38.

## VETERINARY CERTIFICATES AND MEDALS

The Society established a Veterinary Department in 1823, but by an arrangement made with the Royal College of Veterinary Surgeons, the Society's examination ceased in 1881. Holders of the Society's Veterinary Certificate are entitled to become members of the Royal College of Veterinary Surgeons on payment of certain fees, without being required to undergo any further examination. The number of students who passed for the Society's Certificate is 1183.

The Society gives annually a limited number of silver medals for Class competition to each of the two Veterinary Colleges in Scotland—the Royal (Dick) Veterinary College, Edinburgh, and the Glasgow Veterinary College, Glasgow.

## CHEMICAL DEPARTMENT

*Chemist to the Society*—J. F. TOCHER, D.Sc., F.I.C., Crown Mansions,  
41½ Union Street, Aberdeen.

The object of the Chemical Department is to promote the diffusion of a knowledge of Chemistry as applied to agriculture among the members of the Society, to carry out experiments for that purpose, to assist members who are engaged in making local experiments requiring the direction or services of a chemist, to direct members in regard to the use of manures and feeding-stuffs, to assist them to put the purchase of these substances under proper control, and in general to consider all matters coming under the Society's notice in connection with the Chemistry of Agriculture.

### MEMBERS' PRIVILEGES IN RESPECT TO ANALYSES.

The Directors are anxious to take any steps in their power to expose the vendors of inferior fertilisers and feeding-stuffs, and the members can give them assistance in this by supplying to the Chemist, when sending samples for analysis, information as to the guarantee, if any, on which the goods were sold, and also as to the price charged.

*These charges apply only to analyses made for agricultural purposes, and for the sole and private use of members of the Highland and Agricultural Society who are not engaged in the manufacture or sale of the substances analysed.*

Valuations of manures, according to the Society's scale of units, will be supplied if requested.

The Society will not be liable for payment of fees in respect of analyses for any member in excess of £5 for any one year, or £10 for any five consecutive years.

The undernoted fees are those payable by a member. These amounts represent only one-third of the total fee for any particular analysis, the other two-thirds being paid by the Society.

This scale does not apply to members whose subscriptions are in arrears.

### FERTILISERS AND FEEDING-STUFFS.

- |   |      |
|---|------|
| (1) The determination of one ingredient in a single sample of a <i>manure</i> or of a <i>feeding-stuff</i> . . . . .  | 3/6  |
| (2) The determination of two ingredients in a single sample of a <i>manure</i> or of a <i>feeding-stuff</i> . . . . . | 5/-  |
| (3) The complete analysis of a sample of a <i>manure</i> or of a <i>feeding-stuff</i> . . . . .                       | 10/- |

*For example—*

*For one ingredient only.*

Linseed and other cakes, for oil or for albuminoids . . .	3/6
Feeding meals, ground cereals, for oil or for albuminoids . . .	
Bone meals, for nitrogen or for total phosphate . . .	
Compound manures, for nitrogen or for soluble phosphate or for insoluble phosphate or for potash . . .	
Superphosphate, for soluble phosphate or for insoluble phosphate . . .	
Ground mineral phosphate, for insoluble phosphate or for citric soluble phosphate . . .	
Slag phosphate, for insoluble phosphate or for citric soluble phosphate . . .	

*For two ingredients only.*

Any two ingredients of a manure or of a feeding-stuff . . .	5/-
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*For a complete analysis.*

For manures, the proportions of nitrogen (nitrogen included as nitrates or as ammonia compounds), soluble phosphate, insoluble phosphate, potash ; For feeding-stuffs, the proportions of oil, albuminoids, carbohydrates, iodine, mineral matter, fibre and moisture . . .	10/-
--	------

(4) Ground Limestone, for carbonic acid and calcium, two determinations . . .	5/-
(5) Ground Lime, for percentage of calcium oxide . . .	3/6

#### AGRICULTURAL PRODUCTS.

(6) Turnips, sugar beet, for total sugar . . .	5/-
(7) Turnips, sugar beet, for oil, albuminoids, sugar, mineral matter, fibre and moisture . . .	10/-
(8) Grass, hay, ensilage, grain, &c., for oil, albuminoids, carbohydrates, mineral matter, fibre and moisture . . .	10/-
(9) Grain, for carbohydrates and moisture . . .	5/-

#### MILK AND MILK PRODUCTS.

(10) Milk, fresh, for butter fat only, by Gerber process . . .	1/-
(11) Milk, fresh, for butter fat, by Gerber, and solids not fat . . .	2/6
(12) Milk, sour sample, for butter fat, and solids not fat. Soxhlet extraction and Government Laboratory method for sour sample . . .	5/-
(13) Milk, for preservatives, borates, sulphur dioxide, hydrogen peroxide, formalin . . .	5/-
(14) Butter, for true butter fat and moisture (Reichert), for genuineness . . .	5/-
(15) Butter, for true butter fat (Reichert), moisture, foreign fat, preservatives . . .	7/6



## WATER AND LIQUID SUBSTANCES.

*Cases containing bottles for water samples and instructions for sampling are sent from the laboratory on application.*

- |  |      |
|--|------|
| (16) Supply of water at farm, for total solids, free ammonia, albuminoid ammonia, nitrites, nitrates, hardness, for fitness for domestic use or potability . . .   | 12/6 |
| (17) Supply of water at farm, for potability as above, and for proportions of mineral constituents, lead, copper, acidity pH value, action of water on lead (plumbo solveney), action of water on copper . . . | £1   |
| (18) Farm-yard manure, liquid manure, for nitrogen, potash, phosphates, and proportion of other mineral substances . . . . .   | £1   |

## MISCELLANEOUS.

- |   |         |
|---|---------|
| (19) Feeding oils and fats, for composition and quality . . .                           | 10/-    |
| (20) Search for proportion of arsenic in feeding-stuff . . .                            | 10/-    |
| (21) Search for proportion of lead in feeding-stuff . . .                               | 10/-    |
| (22) Search for arsenic or any one poison in feeding-stuff . . .                        | 10/-    |
| (23) Search for proportion of any one poison in viscera . . .                           | 10/-    |
| (24) Search for poisons in food or in viscera, and proportion of poison found . . . . . | £1 10/- |
- (Veterinary surgeons are not entitled to have searches made for poisons in food or viscera under the Society's scheme for clients who are not members of the Society.)*
- |  |      |
|--|------|
| (25) Proportion of arsenic in sheep dips or insecticides . . .   | 10/- |
| (26) Proportion of carbolic acid in sheep dips or insecticides . . .                                     | 5/-  |
| (27) Proportion of tar acids in sheep dips or insecticides . . .   | 10/- |
| (28) Insecticides, foot rot pastes and other agricultural remedies for live stock and farm produce . . . | £1   |

*Samples should be sent (carriage paid) to Dr J. F. TOCHER,  
Crown Mansions, 41½ Union Street, Aberdeen.*

## INSTRUCTIONS FOR SELECTING SAMPLES FOR ANALYSIS.

## MANURES.

Any method of sampling mutually agreed upon between buyer and seller may be adopted, but the following method is recommended as a very complete and satisfactory one: Four or more bags should be selected for sampling. Each bag is to be emptied out separately on a clean floor, worked through with the spade, and one spadeful taken out and set aside. The four or more spadefuls thus set aside are to be mixed together until a uniform mixture is obtained. Of this mixture one spadeful is to be taken, spread on paper, and still more thoroughly mixed, any lumps which it may contain being broken down with the hand. Of this mixture two samples of about half a pound each should be taken by the purchaser or his agent, in the presence of the seller or his agent or two witnesses (due notice having been given to the seller of the time and place of sampling), and these

samples should be taken as quickly as possible, and put into bottles or tin cases to prevent loss of moisture, and having been labelled, should be sealed by the samplers—one or more samples to be retained by the purchaser, and one to be sent to the Chemist for analysis.

#### FEEDING-STUFFS.

Samples of feeding-stuffs which are in the form of meal may be taken in a similar manner to that mentioned above.

Samples of cake should be taken by selecting four or more cakes from the bulk. These should be nudded to a size not larger than walnuts. The nudded cake should then be thoroughly mixed and samples of not less than one pound each taken from it. The samples should be put into bottles or tins, sealed up, and labelled. One sample should be sent to the Chemist, and one or more duplicates retained by the purchaser.

#### VEGETABLE PRODUCTS.

*Turnips, &c.*, at least 50 bulbs carefully selected as of fair average growth.

*Hay, straw, ensilage, &c.*, should be sampled from a thin section cut across the whole stack or silo, and carefully mixed; above 2 lb. weight is required for analysis.

*Grain* should be sampled like manures.

*Grass* should be representative of the whole field; about 5 lb. weight is required for analysis.

#### DAIRY PRODUCE.

*Milk.*—Samples of milk from individual cows should be taken direct from the milk-pail after complete milking. Average samples from a number of cows should be taken immediately after milking. Specify whether the sample is morning or evening milk, or a mixture of these. Samples to be tested for adulteration should not be drawn from the bottom or taken from the top of standing milk, but they should be ladled from the vessel after the milk has been thoroughly mixed. Samples of milk should be sent immediately to the Chemist.

For most purposes a half-pint bottle of milk is a large enough sample.

*Butter.*—About quarter-pound samples are required.

#### WATERS.

When the water is from a well, it should be pumped for some minutes before taking the sample.

If the well has been standing unused for a long time, it should be pumped for some hours, so that the water may be renewed as far as possible.

If the well has been newly dug or cleaned out, it should be pumped as dry as possible, daily, for a week before taking the sample.

Water from cisterns, tanks, ponds, &c., should be sampled by immersing the bottle entirely under the water, and holding it, neck

upwards, some inches below the surface. *Water from the surface should not be allowed to enter the bottle.*

Spring or stream water should not be sampled in very wet weather, but when the water is in ordinary condition. Such waters should be sampled by immersing the bottle. If not deep enough for that purpose, a perfectly clean cup should be used for transferring the water to the bottle.

When the bottle has been filled the stopper should be rinsed in the water before replacing it.

Interference with or disturbance of wells or springs, or the ground in their immediate vicinity, must be carefully avoided during sampling, and for at least twenty-four hours before it.

After a sample has been taken, it should be sent to the Chemist as speedily as possible.

A description of the source and circumstances of the water should accompany the sample, as the interpretation of the analytical results depends to some extent on a knowledge of such particulars.

*N.B.*—Stone jars and old wine bottles are unsuitable for conveying samples. Winchester quarts chemically cleaned should be obtained from Dr J. F. TOCHER, Crown Mansions, 41½ Union Street, Aberdeen.

## COMPOSITION AND CHARACTERISTICS OF MANURES AND FEEDING-STUFFS.

(See 'Transactions,' Fifth Series, vol. xi., 1899.)

### FORMS OF GUARANTEE

#### GUARANTEE OF MANURE.

I guarantee that the manure called.....and sold by me to  
.....contains—

<i>Soluble phosphoric acid</i>	.	.	.	.	per cent.
<i>Insoluble phosphoric acid</i>	.	.	.	.	per cent.
<i>Potash</i>	.	.	.	.	per cent.
<i>Total nitrogen</i>	.	.	.	.	per cent.

Date... ..19...

Signature of seller.....

#### GUARANTEE OF FEEDING-STUFF.

I guarantee that the feeding-stuff called.....and sold by me to  
.....contains—

<i>Albuminoids</i>	.	.	.	.	per cent.
<i>Oil</i>	.	.	.	.	per cent.
<i>Fibre</i>	.	.	.	.	per cent.

Date... ..19...

Signature of seller.....

### PRICES OF FEEDING-STUFFS FOR SEASON 1936.

(Cash Prices as fixed on 8rd June. These prices are subject to variation from month to month or oftener.)

(For Cash Prices as fixed on 5th February 1936, see previous volume.)

Name of Feeding-Stuff.	Price per Ton.	Name of Feeding-Stuff.	Price per Ton.
Linseed Cake (Home), 8% Oil, 28% Albuminoids	£7 10 0	Broad Bran	£6 12 6
Linseed Cake (Imported)	7 0 0	Medium Bran (Leith)	6 2 6
Cotton Seed Cake (Egyptian) (undecorticated), Home, at Leith,		(Glasgow)	5 15 0
4½% Oil, 22% Albuminoids	4 17 6	Thirds or Farings	6 10 0
Cotton Seed Cake (Egyptian) (undecorticated), Imported, at Leith	4 12 6	Dried Distillery Grains	6 10 0
Ground Nut Cake—Leith—		Dried Distillery Grains, 9% Oil,	
Decorticated (Expeller), 8% Oil,		20% Albuminoids	5 17 6
42% Albuminoids, 13% Fibre.	6 15 0	Dried Brewers' Grains.	4 15 0
Decorticated (Expeller), 8% Oil,		Feeding Treacle	6 5 0
50% Albuminoids, 8% Fibre	7 0 0	Locust Beans (Kibbled)*	6 5 0
Decorticated Cotton Seed Cake,		Maize (Round Plate)*	4 18 9
8% Oil, 42% Albuminoids	7 0 0	(Flaked)*	6 5 0
Decorticated Cotton Seed Meal,		Beans (Imported China) (Glasgow)	7 2 6
7% Oil, 42% Albuminoids.	7 2 6	Bean Meal	8 0 0
Decorticated Cotton Seed Meal,		Soya Bean Meal (extracted)	8 12 6
6% Oil, 40% Albuminoids.	6 0 0	Home Oats (Feeding)	5 10 0
Palm kernel Cake	6 15 0	White Fish Meal (Aberdeen)	12 15 0
Rice Bran Meal	4 12 6	" (Leith)	13 10 0
		" (Glasgow)	13 10 0
		Ground Barley	6 10 0
		Skim Milk Powder	13 10 0

\* In Railway Sacks.

† In two-ton lots delivered.

### PRICES OF FERTILISERS AND FEEDING-STUFFS FOR SEASON 1937.

(Cash Prices as fixed on 3rd February. These prices are subject to variation from month to month or oftener.)

## SUPERPHOSPHATES.

ITEM TO BE VALUED.	PRICES FOR THE UNDERNOTED PERCENTAGES.			
PHOSPHORIC ACID DISSOLVED . . . =TRICALCIUM PHOSPHATE DISSOLVED	13·75 80	16·0 85	18·0 89·3	21·0 45·9
February Price per ton . . .	£2 16 0	£3 1 0	£3 6 0	£3 13 6
Price per Unit . . . . .	4/0½	3/9½	3/8	3/6

## FERTILISERS.

(Other than Superphosphates.)

Name of Fertiliser.	Guarantee.	Price per Ton.	Price per Unit.
Sulphate of Ammonia (neutral)* . . . . .	20·6 % Nitrogen	£ s. d. 7 3 6	s. d. 6 11½
" " (March-June)	" "	7 5 0	7 0½
Basic Slag † . . . . .	14 % Total Phos. Acid		
" " † . . . . .	=80·60 % Tric. Phos.	2 11 0	3 7½
" " † . . . . .	15 % Total Phos. Acid		
" " † . . . . .	=82·75 % Tric. Phos.	2 12 6	3 6
" " † . . . . .	15·75 % Total Phos. Acid		
" " † . . . . .	=84·35 % Tric. Phos.	2 15 0	3 6
Potassic Slag . . . . .	12 % Phos. Acid		
" " . . . . .	=26·21 % Tric. Phos.		P 4 1
" " . . . . .	6 % Potash	3 10 0	Pot. 3 6
Bone Meal (Home and Indiau) . . . . .	4 % Nit., 20 % Phos. Acid		N 14 9
" " . . . . .	=43·68 % Tric. Phos.	6 12 6	P 3 8½
" " . . . . .	0·75 % Nit., 27·5 % Phos. Acid		N 14 1
Steamed Bone Flour . . . . .	=60·06 % Tric. Phos.	5 7 6	P 3 6½
Calcium Cyanamide (Feb.) ‖ . . . . .	20·6 % Nitrogen	7 2 6	6 11
" " (March) ‖ . . . . .	" "	7 3 9	6 11½
" " (April-June) ‖ . . . . .	" "	7 5 0	7 0½
Ground Mineral Phosphate § . . . . .	26 % Phos. Acid		
" " . . . . .	=56·79 % Tric. Phos.	2 15 0	2 1½
" " . . . . .	34 % Phos. Acid		
" " . . . . .	=74·26 % Tric. Phos.	3 15 0	2 2½
" " . . . . .	9 % Phos. Acid		P 2 7½
Phosphatic Lime (Belgian) ¶ . . . . .	=19·66 % Tric. Phos.,		Carb. of
" " . . . . .	65 % Carb. of Lime	2 5 0	Lime 0 4
Potassic Mineral Phosphate . . . . .	6 % Pot., 21 % Phos. Acid		P 2 2½
" " . . . . .	=45·87 % Tric. Phos.	3 6 3	Pot. 3 3
" " . . . . .	9 % Pot., 18 % Phos. Acid		P 2 8½
" " . . . . .	=39·30 % Tric. Phos.	3 11 3	Pot 3 4
Nitrate of Soda* . . . . .	16 % Nitrogen	7 12 6	9 6½
Nitro Chalk* . . . . .	15·5 % "	7 5 0	9 4½
Chilean Potassium Nitrate* . . . . .	15 % Nit., 15 % Pot.	8 15 0	N 8 10½
Kainit . . . . .	14 % Potash	3 0 0	Pot. 2 9½
Potash Salts . . . . .	30 % "	4 15 0	4 3½
Sulphate of Potash . . . . .	48·5 % "	9 7 0	3 2
Muriate of Potash . . . . .	50 % "	7 15 0	3 10½
" " . . . . .	" "		3 1½

Ground Lime, in bags (65 % calcium oxide), at Dufftown 37/- per ton; (60 % calcium oxide) at Grange, 37/- per ton; (70 % calcium oxide) at Charleston, 35/- per ton; at Dunbar, 32/6 per ton; (75 % calcium oxide) at Gulls, 33/- per ton; at Fushiebridge, 33/- per ton.

English Ground Lime (80 % calcium oxide), to Edinburgh, 40/- per ton; to Lanark, 37/- per ton; to Stirling, 41/- per ton.

English Ground Lime (95 % calcium oxide), to Edinburgh, 50/- per ton.

Ground Limestone (98 % calcium carbonate), to Edinburgh, 30/- per ton; to Lanark, 28/- per ton; to Stirling, 31/6 per ton; to Dumfries, 26/6 per ton; in six-ton lots. Bags to be returned to sender.

The prices for all fertilisers are cash prices for two-ton lots in bags at Leith or Glasgow, unless otherwise stated. Where prices are quoted carriage paid, there is a reduction, in certain cases, of from 5/- to 10/- per ton when lifted Ex Sellers' stores.

\* Carriage paid to any railway station in six-ton lots. Four-ton lots 1/- more per ton.

† Price at Leith (5/- less Ex. ship).

‡ The fineness of Basic Slag is such that 80% of the powder will pass through the standard sieve.

‖ Four-ton lots carriage paid. § 90% passing through standard sieve. ¶ Price at Dumfries.

N.B.—When these units are multiplied by the percentages in the analysis of a Manure, they will produce a value representing very nearly the cash price per ton at which TWO TONS may be bought in fine sowing condition at Leith or Glasgow. Larger purchases may be made on more favourable terms.

## FEEDING-STUFFS.

Name of Feeding-Stuff.	Price per Ton.	Name of Feeding-Stuff.	Price per Ton.
	£ s. d.		£ s. d.
Linseed Cake (Home), 8% Oil, 28% Albuminoids . . . . .	9 7 6	Dried Distillery Grains . . . . .	7 5 0
Linseed Cake (Imported) . . . . .	9 7 6	„ „ Brewers' Grains . . . . .	6 7 6
Cotton Seed Cake (Egyptian) (undecorticated) at Leith, 4.5% Oil, 22% Albuminoids . . . . .	6 0 0	Feeding Treacle . . . . .	6 0 0
Ground Nut Cake—Leith—Decorticated (Expeller), 8% Oil, 42% Albuminoids, 13% Fibre . . . . .	9 7 6	Locust Beans (Kibbled)* . . . . .	7 5 0
Decorticated (Expeller), 8% Oil, 46% Albuminoids, 8% Fibre . . . . .	9 10 0	Maize (Round Plate)* . . . . .	6 0 0
Decorticated Cotton Seed Cake—8% Oil, 42% Albuminoids . . . . .	9 10 0	„ „ (Flaked)* (Leith) . . . . .	7 5 0
Decorticated Cotton Seed Meal—7% Oil, 42% Albuminoids . . . . .	10 0 0	„ „ „ (Glasgow) . . . . .	7 10 0
Rice Bran Meal . . . . .	7 0 0	Beans (Imported China) (Glasgow) . . . . .	8 0 0
Broad Bran . . . . .	9 0 0	Bean Meal . . . . .	8 10 0
Medium Bran . . . . .	8 12 6	Soya Bean Meal (extracted) . . . . .	9 15 0
Parings or Wheatings . . . . .	8 15 0	Home Oats (Feeding) . . . . .	7 15 0
		White Fish Meal (Aberdeen) . . . . .	14 5 0
		„ „ „ (Leith) . . . . .	14 12 6
		„ „ „ (Glasgow) . . . . .	14 12 6
		Ground Barley . . . . .	8 15 0
		Skim Milk Powder† . . . . .	25 15 0
		Dried Grass Meal (Perth) . . . . .	24 15 0
			8 10 0

\* In Railway Sacks. † In two-ton lots delivered. ‡ In four-ton lots delivered.

## CLASSIFICATION OF MANURES.

BONE MEALS . . . . .	{	Genuine Bone Meal contains about 20 per cent Phosphoric Acid equal to 43.7 per cent Tricalcium Phosphate, and about 4 per cent Nitrogen. If phosphates are low, Nitrogen will be high, and conversely.
STEAMED BONE FLOUR . . . . .	{	Ground to flour, and containing 27.5 per cent Phosphoric Acid equal to about 60 per cent Phosphates and about 8 per cent Nitrogen.
MIXTURES AND COMPOUND MANURES . . . . .	{	To be valued according to the following units: Nitrogen, 7/-; Soluble Phosphoric Acid, 4/-; Insoluble Phosphoric Acid, 3/-; and Potash, 4/-. The value so arrived at will be the value at Leith or Glasgow, exclusive of the cost of mixing, bags and bagging, which may be taken on an average at about 20/- per ton.
DISSOLVED BONES . . . . .	{	Must be pure—i.e., containing nothing but natural bones and Sulphuric Acid.

## INSTRUCTIONS FOR VALUING MANURES.

The unit used for the valuation of manures is the hundredth part of a ton, and as the results of analyses of manures are expressed in parts per hundred, the percentage of any ingredient of a manure when multiplied by the price of that ingredient represents the value of the quantity of it contained in a ton.

As an example take muriate of potash; a good sample (see p. 44) will be guaranteed to contain 50 per cent of oxide of potash. All potash manures are valued according to the amount of potash (oxide of potash) they yield, and muriate of potash yields 50 per cent of potash ( $K_2O$ )—i.e., 50 units per ton; and as a ton of muriate of potash costs £7, 15s., the price of the unit is the fiftieth part of that—viz.,  $3/1\frac{1}{2}$ . If on analysis a sample of muriate of potash guaranteed to contain 50 per cent of potash is found to contain only 47 per cent, the price per ton will be  $9/4$  (three times  $3/1\frac{1}{2}$ ) less—viz., £7, 5s. 8d.

Similarly with all other manures, the price per unit is derived from

the price per ton of a sample of good material up to its guarantee, and therefore the proper price per ton of a manure is found by multiplying the price of the unit of the valuable ingredient by the percentage as found by analysis. If a manure contains more than one valuable ingredient, the unit value of each ingredient is multiplied by its percentage, and the values so found when added together give approximately the price per ton of the manure.

Nitrate of soda contains no ammonia, but it contains nitrogen, and 14 units of nitrogen are equivalent to 17 units of ammonia.

The commercial values of manures are determined by means of the UNITS in the following manner:—

Take the results of analysis of the manure, and look for the following substances:—

Phosphates dissolved (or soluble phosphoric acid)	
Phosphates undissolved (or insoluble phosphoric acid)	No other items but these are to be valued.
Total phosphoric acid	
Nitrogen	
Potash	

Should the results of analysis or the guarantee not be expressed in that way, the chemist or the seller should be asked to state the quantities in these terms.

Suppose the manure is ground mineral phosphate—

The proportion of phosphate present in a sample guaranteed to contain 26 per cent phosphoric acid, may be 24 per cent phosphoric acid. The price per unit of phosphoric acid in ground mineral phosphate (26 per cent grade) is 2s. 1½d. The value of ground mineral phosphate containing 24 per cent phosphoric acid is therefore 24 times 2s. 1½d., equal to £2, 11s. per ton.

Suppose the manure is a superphosphate—say an ordinary superphosphate, 15 per cent soluble phosphoric acid,—the price per unit of phosphoric acid in superphosphate (16 per cent grade) is 3/9½ at Leith.

It is valued thus—

Soluble phosphoric acid. 15 times 3/9½, equal to £2, 17s. 2d.

Insoluble phosphoric acid is not valued in a superphosphate.

Suppose the manure is a compound fertiliser containing 4 per cent nitrogen, 7 per cent soluble phosphoric acid, 3 per cent insoluble phosphoric acid, and 4 per cent potash. From the units given on p. 45 for "Mixtures and Compound Manures," the value of this compound fertiliser is obtained as follows:—

The value of the—

Nitrogen will be . . . . .	£1	8	0	per ton
Soluble phosphoric acid will be . . . . .	1	8	0	"
Insoluble phosphoric acid will be . . . . .	0	9	0	"
Potash will be . . . . .	0	16	0	"
	<hr/>			
	£4	1	0	

The value of this manure will thus be £4, 1s. per ton, exclusive of the cost of mixing, bags and bagging, which may be taken on an average at about 20/- per ton.

*Notes.*—The units have reference solely to the MARKET PRICES of MANURES, and not to their AGRICULTURAL VALUES.

**TABLE OF COMPENSATION VALUES FOR 1937.**

**TABLE SHOWING THE VALUE OF FEEDING-STUFFS AS MANURE PER TON, AND THE COMPENSATION VALUE PER TON OF FOOD CONSUMED, BASED ON THE AVERAGE UNIT PRICES OF FERTILISERS FOR 1937.**

The following is a Table showing (under Section A) the average proportions of digested nitrogen, undigested nitrogen, phosphoric acid, and potash present in the feeding-stuffs named. The Table also shows the value per unit of nitrogen (digested and undigested), phosphoric acid, and potash, the prices per unit being the value per unit for compound manures prevailing for 1937. Under Section B of the Table is shown the compensation value per ton of food consumed for each of the feeding-stuffs named, based on the unit prices for 1937. Column (1) of Section B of the Table shows the value per ton recovered in dung; Col. (2) of the same section shows the value of the lasting part of dung per ton; while the remaining three columns show the residual values per ton after one crop, two crops, and three crops have been removed.

In accordance with the decision arrived at by the Committee appointed by a representative meeting of Scottish agriculturists, who reported in September 1917 on the "Compensation for Manurial Improvements and Cumulative Fertility," under the Agricultural Holdings (Scotland) Act, 1908, the value of undigested nitrogen per ton as manure is calculated as being 70 per cent of the value of digested nitrogen. The residual value, after one crop has been removed, is taken as one-half of the original residual value. Residual values, after one crop has been removed, are reduced by one-half after each crop.



FOODS.	VALUE PER					
	Digested Nitrogen.			Undigested Nitrogen.		
	Per cent in food.	Value at 7s. per unit.	Two-fifths value to manure.	Per cent in food.	* Value at 5s. per unit.	Three-fourths value to manure.
	(1)	(2)	(3)*	(4)	(5)	(6)
		s. d.	s. d.		s. d.	s. d.
Cotton-cake, decorticated . . . . .	5.92	41 5	16 7	0.98	4 11	3 8
Cotton-cake, undecorticated . . . . .	2.73	19 1	7 8	0.81	4 1	3 1
Linseed-cake . . . . .	4.08	28 7	11 5	0.67	3 4	2 6
Linseed . . . . .	3.28	23 0	9 2	0.32	1 7	1 2
Soya-bean cake . . . . .	6.10	42 8	17 1	0.75	3 9	2 10
Palm-nut cake . . . . .	1.88	13 2	5 3	0.62	3 1	2 4
Cocoa-nut cake . . . . .	2.65	18 7	7 5	0.75	3 9	2 10
Earth-nut cake . . . . .	6.86	48 0	19 2	0.76	3 10	2 11
Rape cake . . . . .	3.97	27 9	11 1	0.93	4 8	3 6
Beans . . . . .	3.48	24 4	9 9	0.52	2 7	1 11
Peas . . . . .	3.10	21 8	8 8	0.50	2 6	1 11
Wheat . . . . .	1.49	10 5	4 2	0.31	1 7	1 2
Barley . . . . .	1.16	8 1	3 3	0.49	2 5	1 10
Oats . . . . .	1.52	10 8	4 3	0.48	2 5	1 10
Maize . . . . .	1.22	8 6	3 5	0.48	2 5	1 10
Rice-meal . . . . .	1.08	7 7	3 0	0.82	4 1	3 1
Locust beans . . . . .	0.82	5 9	2 4	0.38	1 11	1 5
Malt . . . . .	1.34	9 5	3 9	0.36	1 10	1 5
Malt culms . . . . .	3.12	21 10	8 9	0.78	3 11	2 11
Bran . . . . .	1.98	13 10	5 6	0.52	2 7	1 11
Brewers' and distillers' grains (dried) . . . . .	2.34	16 5	6 7	0.96	4 10	3 8
Brewers' and distillers' grains (wet) . . . . .	0.59	4 2	1 8	0.22	1 1	0 10
Dried distillery dreg . . . . .	3.45	24 2	9 8	1.86	9 4	7 0
Clover hay . . . . .	1.21	8 6	3 5	1.03	5 2	3 11
Meadow hay . . . . .	0.88	6 2	2 6	0.62	3 1	2 4
Wheat straw . . . . .	0.02	0 2	0 1	0.43	2 2	1 8
Barley straw . . . . .	0.10	0 8	0 3	0.30	1 6	1 2
Oat straw . . . . .	0.17	1 2	0 6	0.33	1 8	1 3
Mangolds . . . . .	0.15	1 1	0 5	0.07	0 4	0 3
Swedes . . . . .	0.16	1 1	0 5	0.09	0 5	0 4
Turnips . . . . .	0.13	0 11	0 4	0.05	0 3	0 2
Fish-meal . . . . .	8.03	56 7	22 8	0.90	4 6	3 5

See last paragraph of explanatory note to the Table.

A.						B.					
TON AS MANURE.						COMPENSATION VALUE PER TON OF FOOD CONSUMED.					
Phosphoric Acid.			Potash.			†	†	Residual Value after			
Per cent in food.	Value at 4s. per unit.	Three-fourths value to manure.	Per cent in food.	Value at 4s. per unit.	Three-fourths value to manure.	Value recovered in dung.	Value of lasting part of dung.	* (3) One crop.	* (4) Two crops.	* (5) Three crops.	
(1)	(8)	(9)	(10)	(11)	(12)	(13) *	(14)	(15)	(16)	(17)	
	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
3.10	12 5	9 4	2.00	8 0	6 0	35 7	19 0	9 6	4 9	2 5	
2.00	8 0	6 0	2.00	8 0	6 0	22 9	15 1	7 7	3 9	1 11	
2.00	8 0	6 0	1.40	5 7	4 2	24 1	12 8	6 4	3 2	1 7	
1.54	6 2	4 7	1.37	5 6	4 1	19 0	9 10	4 11	2 6	1 3	
1.30	5 2	3 11	2.20	8 10	6 7	30 5	13 4	6 8	3 4	1 8	
1.20	4 10	3 7	0.50	2 0	1 6	12 8	7 5	3 9	1 10	0 11	
1.40	5 7	4 2	2.00	8 0	6 0	20 5	13 0	6 6	3 3	1 8	
2.00	8 0	6 0	1.50	6 0	4 6	32 7	13 5	6 9	3 4	1 8	
2.50	10 0	7 6	1.50	6 0	4 6	26 7	15 6	7 9	3 11	1 11	
1.10	4 5	3 4	1.30	5 2	3 11	18 11	9 2	4 7	2 4	1 2	
0.85	3 5	2 7	0.96	3 10	2 11	16 1	7 5	3 9	1 10	0 11	
0.85	3 5	2 7	0.53	2 1	1 7	9 6	5 4	2 8	1 4	0 8	
0.75	3 0	2 3	0.55	2 2	1 8	9 0	5 9	2 11	1 5	0 9	
0.60	2 5	1 10	0.50	2 0	1 6	9 5	5 2	2 7	1 4	0 8	
0.60	2 5	1 10	0.37	1 6	1 1	8 2	4 9	2 5	1 2	0 7	
0.60	2 5	1 10	0.37	1 6	1 1	9 0	6 0	3 0	1 6	0 9	
0.80	3 2	2 5	0.80	3 2	2 5	8 7	6 3	3 2	1 7	0 9	
0.80	3 2	2 5	0.60	2 5	1 10	9 5	5 8	2 10	1 5	0 9	
2.00	8 0	6 0	2.00	8 0	6 0	23 8	14 11	7 6	3 9	1 10	
2.70	10 10	8 1	1.45	5 10	4 4	19 10	14 4	7 2	3 7	1 10	
1.61	6 5	4 10	0.20	0 10	0 7	15 8	9 1	4 7	2 3	1 2	
0.42	1 8	1 3	0.05	0 2	0 2	3 11	2 3	1 2	0 7	0 3	
0.44	1 9	1 4	0.22	0 11	0 8	18 8	9 0	4 6	2 3	1 2	
0.57	2 3	1 9	1.50	6 0	4 6	13 7	10 2	5 1	2 7	1 3	
0.40	1 7	1 2	1.60	6 5	4 10	10 10	8 4	4 2	2 1	1 1	
0.24	1 0	0 9	0.80	3 2	2 5	4 11	4 10	2 5	1 3	0 7	
0.18	0 9	0 6	1.00	4 0	3 0	4 11	4 8	2 4	1 2	0 7	
0.24	1 0	0 9	1.00	4 0	3 0	5 6	5 0	2 6	1 3	0 8	
0.07	0 3	0 3	0.40	1 7	1 2	2 1	1 8	0 10	0 5	0 3	
0.06	0 3	0 2	0.22	0 11	0 8	1 7	1 2	0 7	0 4	0 2	
0.05	0 2	0 2	0.30	1 2	0 11	1 7	1 3	0 8	0 4	0 2	
7.24	29 0	21 9	0.50	2 0	1 6	49 4	26 8	13 4	6 8	3 4	

† The figures in column (13) are the sum of columns (3), (6), (9), and (12).

‡ The figures in column (14) are the figures in column (13) from which the corresponding figures in column (3) have been subtracted.

## BOTANICAL DEPARTMENT

*Consulting Botanist to the Society—(vacant).*

The Society has fixed the following scale of charges for the examination of plants and seeds for the *bona fide* and individual use and information of members of the Society (not being seedsmen), who are particularly requested, when applying to the Consulting Botanist, to mention the kind of examination required, and to quote its number as appearing in the undernoted Scale of Charges. The charge for examination must be paid at the time of application, and the carriage or postage on all parcels must be prepaid.

### *Scale of Charges for Examinations.*

1. A report on the purity, amount, and nature of foreign materials, and the germinating power of a sample of seed . . . . 1s.
2. Determination of the species of any weed or other plant, or of any vegetable parasite, with a report on its habits and the means for its extermination or prevention . . . . 1s.
3. Report on any disease affecting farm crops . . . . 1s.
4. Determination of the species of any natural grass or fodder plant, with a report on its habits and pasture or feeding value . . . . 1s.

The Consulting Botanist's Reports are furnished to enable members—purchasers of seeds and corn for agricultural or horticultural purposes—to test the value of what they buy, and are not to be used or made available for advertising or trade purposes by seedsmen or otherwise.

### *Purchase of Seeds.*

The purchaser should obtain from the vendor, by invoice or other writing, the proper designation of the seeds bought, with a guarantee of the percentage of purity and germination, and of its freedom from ergot, and in the case of clover, from the seeds of dodder or broom-rapé.

It is strongly recommended that the purchase of *prepared mixtures* of seeds should be avoided. The different seeds should be purchased separately and mixed by the farmer: mixtures cannot be tested for germination.

### *The Sampling of Seeds.*

The utmost care should be taken to secure a fair and honest sample. This should be drawn from the bulk delivered to the purchaser, and not from the sample sent by the vendor.

When legal evidence is required, the sample should be taken from the bulk, and placed in a sealed bag in the presence of a witness. Care should be taken that the sample and bulk be not tampered with after delivery, or mixed or brought in contact with any other sample or bulk.

At least one ounce of grass and other small seeds should be sent, and two ounces of cereals and the larger seeds. When the bulk is obviously impure the sample should be at least double the amount specified. Grass seeds should be sent at least four weeks, and seeds of clover and cereals two weeks, before they are to be used.

The exact name under which the sample has been sold and purchased should accompany it.

### *Reporting the Results.*

The Report will be made on a schedule in which the nature and amount of impurities will be stated, and the number of days each sample has been under test, with the percentage of the seeds which have germinated.

"Hard" clover seeds, though not germinating within the time stated, will be considered good seeds, and their percentage separately stated.

The impurities in the sample, including the chaff of the species tested, will be specified in the schedule, and only the percentage of the pure seed of that species will be reported upon; but the REAL VALUE of the sample will be stated. The Real Value is the combined percentages of purity and germination, and is obtained by multiplying these percentages and dividing by 100: thus in a sample of Meadow Fescue having 88 per cent purity and 95 per cent germination, 88 multiplied by 95 gives 8360, and this divided by 100 gives 83.6, the Real Value.

### *Selecting Specimens of Plants.*

The whole plant should be taken up and the earth shaken from the roots. If possible the plants should be in flower or fruit. They must be packed in a light box, or in a firm paper parcel.

Specimens of diseased plants or of parasites should be forwarded as fresh as possible. They must be placed in a bottle, or packed in tinfoil or oil-silk.

All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstances (soil, situation, &c.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

**NOTE.**—Members are reminded that Seeds may now be tested at the Department of Agriculture for Scotland Seed-testing Station. Samples should be addressed to T. Anderson, Esq., Seed-testing Station, East Craigs, Corstorphine, Edinburgh.

## ENTOMOLOGICAL DEPARTMENT

*Consulting Entomologist to the Society*—A. E. CAMERON, M.A., D.Sc.,  
Department of Entomology, University of Edinburgh, 10 George  
Square, Edinburgh.

### REPORTS ON THE ANIMAL ENEMIES OF CROP PLANTS AND LIVE STOCK (INCLUDING POULTRY).

The Consulting Entomologist is prepared to send to any Member of the Society a Report on damage to or diseases of plants and animals due to animal agency (Insects, Mites, Worms, Snails, Slugs, Birds, and the Smaller Mammals), and will advise Members regarding insects or allied animals which, in any stage of their development, infest—

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| (a) Farm crops.                   | (d) Fruit and fruit trees.          |
| (b) Stored grain.                 | (e) Forest trees and stored timber. |
| (c) Garden and greenhouse plants. | (f) Live stock (including poultry). |

Any Member consulting Dr Cameron should give him full particulars of the damage or disease upon which his advice is desired. In addition, there should be sent to him specimens of the injured plants, or the injured parts of plants, &c., as well as specimens of the insects or animals believed to be the cause of the injury.

Specimens should be sent in tin or wooden boxes, or in quills, in order to prevent injury in transmission.

The Directors have fixed the fee payable by Members to Dr Cameron at 2s. 6d. for each case upon which he is consulted: this fee should be sent to him along with the application for information.

Letters and parcels (carriage or postage paid) should be addressed to A. E. Cameron, Esq., M.A., D.Sc., Department of Entomology, University of Edinburgh, 10 George Square, Edinburgh.

## PREMIUMS OFFERED

1937

### GROUP I.—REPORTS.

#### GENERAL REGULATIONS.

1. It is to be distinctly understood that the Society is not responsible for the views, statements, or opinions of any of the writers whose papers are published in the 'Transactions.'

2. All reports must be legibly written, and on one side of the paper only; they must specify the number and subject of the Premium for which they are in competition; they must bear a distinguishing motto, and be accompanied by a sealed letter, similarly marked, containing the name and address of the reporter—initials must not be used.

3. No sealed letter, unless belonging to a report found entitled to the Premium offered, or a portion of it, will be opened without the author's consent.

4. Reports for which a Premium, or a portion of a Premium, has been awarded, become the property of the Society, and cannot be published in whole or in part, or circulated in any manner, without the consent of the Directors. All other papers will be returned to the authors if applied for within twelve months.

5. The Society is not bound to award the whole or any part of a Premium.

6. All reports must be of a practical character, containing the results of the writer's own observation or experiment, and the special conditions attached to each Premium must be strictly fulfilled. General essays, and papers compiled from books, will not be rewarded or accepted. Weights and measurements must be indicated by the imperial standards.

7. The Directors, before or after awarding a Premium, shall have power to require the writer of any report to verify the statements made in it.

8. The decisions of the Board of Directors are final and conclusive as to all matters relating to Premiums, whether for Reports or at General or District Shows; and it shall not be competent to raise any question or appeal touching such decisions before any other tribunal.

9. The Directors will welcome papers from any Contributor on any suitable subject, whether included in the Premium List or not; and if the topic and the treatment of it are both approved, the writer may be remunerated and his paper published.

## SECTION 1.—THE SCIENCE AND PRACTICE OF AGRICULTURE.

### FOR APPROVED REPORTS.

1. On any useful practice in Rural Economy adopted in other countries, and susceptible of being introduced with advantage into Scotland—The Gold Medal. To be lodged by 1st November in any year.

The purpose chiefly contemplated by the offer of this premium is to induce travellers to notice and record such particular practices as may seem calculated to benefit Scotland. The Report to be founded on personal observation.

2. Approved Reports on other suitable subjects. To be lodged by 1st November in any year.

## SECTION 2.—ESTATE IMPROVEMENTS.

### FOR APPROVED REPORTS.

1. By the Proprietor in Scotland who shall have executed the most judicious, successful, and extensive Improvement—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

Should the successful Report be written for the Proprietor by his resident factor or farm manager, a Minor Gold Medal will be awarded to the writer in addition to the Gold Medal to the Proprietor.

The merits of the Report will not be determined so much by the mere extent of the improvements, as by their character and relation to the size of the property. The improvements may comprise reclaiming, draining, enclosing, planting, road-making, building, and all other operations proper to landed estates. The period within which the operations may have been conducted is not limited, except that it must not exceed the term of the Reporter's proprietorship.

2. By the Proprietor or Tenant in Scotland who shall have reclaimed within the ten preceding years not less than forty

acres of Waste Land—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

3. By the Tenant in Scotland who shall have reclaimed within the ten preceding years not less than twenty acres of Waste Land—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

4. By the Tenant in Scotland who shall have reclaimed not less than ten acres within a similar period—The Medium Gold Medal, or Five Pounds. To be lodged by 1st November in any year.

The Reports in competition for Nos. 2, 3, and 4 may comprehend such general observations on the improvement of waste lands as the writer's experience may lead him to make, but must refer especially to the lands reclaimed—to the nature of the soil—the previous state and probable value of the subject—the obstacles opposed to its improvement—the details of the various operations—the mode of cultivation adopted—and the produce and value of the crops produced. As the required extent cannot be made up of different patches of land, the improvement must have relation to one subject; it must be of profitable character, and a rotation of crops must have been concluded before the date of the Report. *A detailed statement of the expenditure and return* and a certified measurement of the ground are requisite.

5. By the Proprietor or Tenant in Scotland who shall have improved within the ten preceding years the Pasturage of not less than thirty acres, by means of top-dressing, draining, or otherwise, without tillage, in situations where tillage may be inexpedient—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

6. By the Tenant in Scotland who shall have improved not less than ten acres within a similar period—The Minor Gold Medal. To be lodged by 1st November in any year.

Reports in competition for Nos. 5 and 6 must state the particular mode of management adopted, the substances applied, the elevation and nature of the soil, its previous natural products, and the changes produced.

### SECTION 3.—HIGHLAND INDUSTRIES.

#### FOR APPROVED REPORTS.

1. The best mode of treating native Wool; cleaning, carding, dyeing, spinning, knitting, and weaving by hand in the Highlands and Islands of Scotland—Five Pounds. To be lodged by 1st November in any year.



**SECTION 4.—MACHINERY.****FOR APPROVED REPORTS.**

To be lodged by 1st November in any year.

**SECTION 5.—FORESTRY.****FOR APPROVED REPORTS.**

1. On Plantations of not less than eight years' standing formed on deep peat-bog—The Medium Gold Medal, or Five Pounds. To be lodged by 1st November in any year.

The premium is strictly applicable to deep peat or flow moss; the condition of the moss previous to planting, as well as at the date of the Report, should, if possible, be stated.

The Report must describe the mode and extent of the drainage, and the effect it has had in subsiding the moss—the trenching, levelling, or other preliminary operations that may have been performed on the surface—the mode of planting—kinds, sizes, and number of trees planted per acre—and their relative progress and value, as compared with plantations of a similar age and description grown on other soils in the vicinity.

## GROUP II.—DISTRICT GRANTS.

## APPLICATIONS.

Forms of Application may be obtained from the Secretary, 8 Eglinton Crescent, Edinburgh 12, which should be completed and returned on or before **1st November 1937**, in respect of a Grant commencing in the following year.

**RENEWAL OF GRANT.**—Applications for **renewal** of a particular Grant will be entertained only after the lapse of a specified interval of years (as undernoted) from the termination of the previous Grant, without prejudice, however, to the competency of applying in such intermediate years for a Grant in any other class.

Class.	Interval.
1. Grant of £12 for Show Premiums for Horses, Cattle, Sheep, and Pigs . . . . .	4 years.
2. Grant of £15 in respect of Stallion engaged for Agricultural purposes . . . . .	4 years.
3. Grant of Silver Medals in aid of Premiums . . . . .	2 years.
4. Special Grants . . . . .	—
5. Grant of £10 to Federations of S.W.R.I. . . . .	2 years.

## CLASS 1.

LOCAL AGRICULTURAL SOCIETIES—GRANTS OF £12 FOR SHOW PREMIUMS FOR HORSES, CATTLE, SHEEP, AND PIGS.

## REGULATIONS, 1937.

1. CLASS OF STOCK—LIMIT OF GRANTS, £340.—The Highland and Agricultural Society will make Grants to Local Societies for prizes for *Breeding Animals* in any of the following Classes of Stock, viz. :—

Cattle.	Horses.
Shorthorn.	Draught Horses.
Aberdeen-Angus.	Hunters.
Galloway.	Hackneys.
Belted Galloway.	Ponies.
Highland.	Shetland Ponies.
Ayrshire.	Sheep.
British Friesian.	Blackface.
Red Poll.	Cheviot.
Jersey.	Border Leicester.
Shetland.	Half-Bred.
	Shropshire.
	Oxford Down.
	Suffolk.
	Wensleydale.
Pigs.	
Any Pure Breed.	

Cross-bred<sup>1</sup> animals are not eligible. The Prizes must be confined to *Breeding Animals*; "bullocks," "geldings," "wethers," and "hog pigs" are excluded.

<sup>1</sup> *Exceptions to this rule may, however, be authorised by the Board of Directors, on application. The Directors are prepared to consider applications from Local Societies which desire to use their grants, or part thereof, as prizes for cross-bred calves and one-year-old cross-bred cattle.*

2. All Competitions must be at the instance of a Local Society. A Committee of Management shall be appointed, and either the Convener of the Committee or the Secretary of the Society must be a Member of the Highland and Agricultural Society of Scotland.

3. GRANT TO SOCIETY, £12.—The portion of the Grant to any one Local Society shall not exceed the sum of £12 in any one year.

4. ALLOCATION OF GRANT.—The Grant from the Highland and Agricultural Society shall not be applied as a Grant in aid of the Premiums offered by the Local Society, but must be offered in the form of separate Prizes for the Animals chosen; and the offer of the Prizes must be announced in the Premium List and Catalogue of the Show as "presented by the Highland and Agricultural Society of Scotland."

5. CONTINUANCE OF GRANT—THREE YEARS.—The Money Grant shall continue for three alternate years, provided always that the Local Society shall, in the two intermediate years, continue the competition by offering Premiums for the same class of Stock as that selected in each previous year to compete for the Highland and Agricultural Society's Prizes.

If no competition takes place for two consecutive years the Grant expires.

6. MEDALS IN INTERMEDIATE YEARS.—In the two intermediate years the Highland and Agricultural Society will place three Silver Medals at the disposal of each Local Society, for the same classes of Stock as those for which the Money Premiums are offered, provided that not less than three lots are exhibited in the same class.

7. When it is agreed to hold the General Show of the Society in any one of the Show Divisions, no provincial Show may be held in that district in the three months immediately preceding the date of the General Show. In the event of a Show being held, the entire grant to the Society will be cancelled.

8. RULES OF COMPETITION.—The Rules of Competition for the Premiums, the funds for which are derived from Grants of the Highland and Agricultural Society, shall be such as are generally enforced by the Society receiving the Grant for Premiums offered by itself.

9. AREA AND PARISHES—FIVE PARISHES.—When making application for Grants from the Highland and Agricultural Society, the Local Society must delineate the area and the number of parishes comprised in the district, and, *except in special cases*, no Local Society shall be entitled to a Grant whose show is not open to at least five Parishes.

10. REPORTS.—Forms of Report will be furnished to the Secretaries of Local Societies. Both in the years when the Grant is offered and in the two intermediate years, detailed reports of the competition must be given on these Forms and lodged with the Secretary of the Highland and Agricultural Society as soon as possible after the Show, and in no case later than 1st November. These reports are subject to the approval of the Directors of the Highland and Agricultural Society, against whose decision there shall be no appeal. All Reports must be signed and certified as marked on the Form. The Grant will lapse if no Report is lodged.

11. GRANTS—WHEN PAID.—The Grants made to Local Societies will be paid in December after the Reports of the awards of the prizes have been received and found to be in order and passed by

the Board of Directors, the Money Grants being paid to the Secretaries of the Local Societies and the Medals sent direct to the winners. *The Secretary of the Local Society must not on any condition whatever pay any premium offered by the Highland and Agricultural Society until he has been informed that the awards are in order and has received the Grant from the Highland and Agricultural Society.*

12. RENEWAL OF GRANT.—No application for renewal of a Money Grant to a Local Society will be entertained until the expiration of four years from the termination of the last Grant.

13. DISPOSAL OF APPLICATIONS.—In disposing of applications for District Grants, the Directors of the Highland and Agricultural Society shall keep in view the length of interval that has elapsed since the expiration of the last Grant, giving priority to those Local Societies which have been longest off the list.

### Grants in 1937.

#### 5th and Final Year—GRANT OF £12.

##### 1. BUCHAN AGRICULTURAL SOCIETY.

*President*—John S. Grant, Skillymarno, Strichen, Aberdeenshire.

*Secretary*—Robert Scott, Town House, Fraserburgh.  
Granted 1933.

##### 2. VALE OF ALFORD AGRICULTURAL ASSOCIATION.

*Convener*—Lord Forbes, Castle Forbes, Whitehouse, Aberdeenshire.

*Secretary*—A. Imlach, Ellangowan, Alford, Aberdeenshire.  
Granted 1933.

##### 3. LARGS, CUMBRAE AND WEMYSS BAY AGRICULTURAL SOCIETY.

*Convener*—John S. Wilson, 21 Crawford Street, Greenock.

*Secretary*—Alexander Grant, Crawford Lea, Largs.  
Granted 1933.

##### 4. DUMFRIES AGRICULTURAL SOCIETY.

*Convener*—James Wyllie, Tinwald Downs, Dumfries.

*Secretary*—David Fergusson, 75 Buccleuch Street, Dumfries.  
Granted 1933.

##### 5. WESTERN DISTRICT OF FIFE AGRICULTURAL SOCIETY.

*Convener*—A. J. Elder, Pitbauchlie, Dunfermline.

*Secretary*—W. Craig Husband, Union Bank Chambers, High Street, Dunfermline.  
Granted 1933.

##### 6. KIRKPATRICK-DURHAM HORTICULTURAL AND AGRICULTURAL SOCIETY.

*Convener*—John Y. F. Clark, Dryburgh, Castle Douglas.

*Secretary*—J. A. Peacock, Kirkpatrick-Durham, Castle Douglas.  
Granted 1933.

## 7. SHOTTS CALDERWATERHEAD FARMERS' SOCIETY.

*Convener*—John Weir, Shottsburn Farm, Salsburgh, Motherwell.

*Secretary*—Robert Martin, Lochfield, Caledonian Road, Wishaw.

Granted 1933.

## 8. WHITBURN AGRICULTURAL SOCIETY.

*Convener*—James G. Sibbald, Hardhill, Bathgate.

*Secretary*—P. A. Simpson, Commercial Bank House, Whitburn, West Lothian.

Granted 1933.

## 4th (Intermediate) Year—3 SILVER MEDALS.

## 9. CENTRAL BANFFSHIRE FARMERS' CLUB.

*Convener*—George A. Morrison, Botary Mains, Cairnie, Huntly.

*Secretary*—John C. Gray, North of Scotland Bank Buildings, Moss Street, Keith.

Granted 1933. (Grant in abeyance 1935, on account of Aberdeen Show.)

## 10. NORTHERN COUNTIES AGRICULTURAL SOCIETY.

*Convener*—R. S. M'William of Garguston, Muir of Ord.

*Secretary*—R. T. W. Wilson Anderson, Solicitor, Dingwall.

Granted 1934.

## 11. STEWARTRY AGRICULTURAL SHOW.

Promoted by the St Mary's Isle Agricultural Society, the Dalbeattie Agricultural Society, and the Gatehouse District Agricultural Society.

*Convener*—H. C. Howard Taylor, Park House, Kirkcudbright.

*Secretary*—W. T. Davidson, Union Bank, Kirkcudbright.

Granted 1934.

## 12. DEESIDE AGRICULTURAL ASSOCIATION.

*Convener*—William H. Hector, Upper Anguston, Peterculter.

*Secretary*—David Humble, Dowalty, Crathes.

Granted 1934.

## 13. GARIOCH FARMER CLUB.

*Convener*—Major A. R. Leith of Petmathen, Oyne, Aberdeenshire.

*Secretary*—Alexander Watt, Cairnhill, Rothney, Inch.

Granted 1934.

## 14. ROSSIE PRIORY AND DISTRICT AGRICULTURAL SOCIETY.

*Convener*—William L. Thoms, Benzie, Invergowrie.

*Secretary*—D. J. Rae, Errol Road, Invergowrie, Perthshire.

Granted 1934.

## 15. EAST OF FIFE AGRICULTURAL SOCIETY.

*Convener*—Major W. C. Gordon Black of Teases, Leven, Fife.

*Secretary*—George M'Dougall, Commercial Bank of Scotland Ltd., Colinsburgh, Fife.

Granted 1934.

## 16. NORTH UIST AGRICULTURAL SOCIETY.

*Convener*—Captain R. M'Erlich, Lochmaddy.

*Secretary*—Peter Morrison, J.P., Sollas, Lochmaddy.

Granted 1934.

3rd (Alternate) Year—GRANT OF £12.

17. TREE AGRICULTURAL SHOW SOCIETY.

*Convener*—John M. Brown, Scarinish, Tiree.

*Secretary*—Hugh MacKinnon, Crossapol, Tiree.

Granted 1932. (Grants in abeyance 1932, 1935, and 1936—no Shows held.)

18. INVERURIE AGRICULTURAL ASSOCIATION.

*Convener*—J. Cameron, Kinkell, Inverurie.

*Secretary*—William R. Cockburn, Holm Cottage, Inverurie.

Granted 1935.

19. STRATHDON AGRICULTURAL ASSOCIATION.

*Convener*—David D. Laurie, Estates Office, Strathdon, Alford, Aberdeenshire.

*Secretary*—William M'Robert, Culfork, Strathdon, Alford, Aberdeenshire.

Granted 1935.

20. YTHANSIDE FARMERS' CLUB.

*Convener*—J. C. Kellas, Balmacassie, Ellon, Aberdeenshire.

*Joint-Secretaries*—William Watson and James Mutch, 20 The Square, Ellon, Aberdeenshire.

Granted 1935.

21. CARRICK FARMERS' SOCIETY.

*Convener*—J. D. H. Forbes, Jameston, Maidens, Girvan.

*Secretary*—James M. Gibson, Royal Bank of Scotland, Maybole.

Granted 1935.

22. ARRAN FARMERS' SOCIETY.

*Convener*—James J. Morton, Machrie, Isle of Arran.

*Secretary*—Donald M'Allister, Clachaig, Kilmorie, Isle of Arran.

Granted 1935.

23. NORTH OF FIFE FOAL SHOW SOCIETY.

*Convener*—John Arbuckle, Lower Luthrie, Cupar, Fife.

*Secretary*—David Blair, Littleinch, Wormit, Fife.

Granted 1935.

24. FETTERCAIRN FARMERS' CLUB.

*Convener*—James Y. Middleton, Balbegno, Fettercairn.

*Secretary*—James Henry, Hatton Mains, Laurencekirk.

Granted 1935.

25. BOTHWELL FARMERS' SOCIETY.

*Convener*—James Russell, Townhead Farm, Holytown, Lanarkshire.

*Secretary*—William Stevenson, Royal Bank of Scotland, Bellshill, Lanarkshire.

Granted 1935.

26. BARRHEAD AGRICULTURAL SOCIETY.

*Convener*—Robert H. Clark, Netherby, Barrhead.

*Joint Hon. Secretary*—J. H. Gibson, Clydesdale Bank Ltd., Barrhead.

Granted 1935.

## 27. WEST TEVIOTDALE AGRICULTURAL SOCIETY.

*Convener*—Douglas Oliver, Hassendeanbank, Hawick.*Secretary*—James W. P. Amos, Northhouse, Hawick.

Granted 1935.

## 28. EASTERN DISTRICT OF STIRLINGSHIRE AGRICULTURAL ASSOCIATION.

*Convener*—George Steel, Mungall, Falkirk.*Secretary*—Robert Waugh, Auction Mart, Falkirk.

Granted 1935.

## 2nd (Intermediate) Year—3 SILVER MEDALS.

## 29. ISLAY, JURA, AND COLONSAY AGRICULTURAL ASSOCIATION.

*Convener*—John G. Morrison of Islay, Islay House, Bridgend, Islay.*Secretary*—Iain M. Mactaggart, Royal Bank of Scotland, Bowmore, Islay.

Granted 1936.

## 30. MARNOCH AND CORNHILL AGRICULTURAL SOCIETY.

*Convener*—John Taylor, Clumhill, Huntly.*Secretary*—William Gray, Mill of Park, Cornhill, Banffshire.

Granted 1936.

## 31. BUTE AGRICULTURAL SOCIETY.

*Convener*—James M'Alister, Meikle Kilmory, Rothesay.*Secretary*—James M. Matheson, County Buildings, Rothesay.

Granted 1936.

## 32. GLENKENS AGRICULTURAL SOCIETY.

*Convener*—Hon. H. M. Upton, The Holme, Balmaclellan, Kirkcudbrightshire.*Secretary*—J. M. Garmory, Pomona Terrace, New Galloway, Kirkcudbrightshire.

Granted 1936.

## 33. DALSERF FARMERS' SOCIETY.

*Convener*—Joseph Goulding, Dalpatrick, Rosebank, Carlisle.*Secretary*—Robert Milligan, Summerhill Avenue, Larkhall, Lanarkshire.

Granted 1936.

## 34. YARROW AND ETTRICK PASTORAL SOCIETY.

*Convener*—George Thomson, Ramseyclench, Ettrick, Selkirk.*Secretary*—George Brunton, Harehead, Selkirk.

Granted 1936.

## 35. STRATHENDRICK AGRICULTURAL SOCIETY.

*Convener*—R. A. Murray of Pirniehill, Drymen.*Secretary*—Robert Bilsland, 35 Wylie Avenue, Alexandria, Dumbartonshire.

Granted 1936.

## 1st Year—GRANT of £12.

36. ABERDOUR AND NORTH-EASTERN AGRICULTURAL ASSOCIATION.  
*Convener*—W. W. Laing, Mill Farm, New Aberdour, Fraserburgh.

*Secretary*—G. W. Chalmers, Castle Farm, Rosehearty, Fraserburgh.

Granted 1937.

37. ECHT, SKENE, AND MIDMAR AGRICULTURAL ASSOCIATION.

*Convener*—Alexander Porter, Upper Affloch, Dunecht, Aberdeenshire.

*Secretary*—A. F. Robertson, Bank House, Echt, Aberdeenshire.

Granted 1937.

38. KILMACOLM AND PORT-GLASGOW AGRICULTURAL SOCIETY.

*Convener*—L. Harper Gow, Sandspoint, Kilmacolm.

*Secretary*—Thomas Russell, Royal Bank of Scotland, Kilmacolm.

Granted 1937.

39. BLACK ISLE FARMERS' SOCIETY.

*Convener*—R. M'Iver, Wester Raddery, Avoch.

*Secretary*—F. Scott, Rosenberg, Cromarty.

Granted 1937.

40. KILLEARN AGRICULTURAL SOCIETY.

*Convener*—James Macadam, Drumtian, Balfroon Station.

*Secretary*—A. D. S. Macadam, Drumtian, Balfroon Station.

Granted 1937.

## CLASS 2.

## HORSE ASSOCIATIONS—GRANTS OF £15 IN RESPECT OF STALLIONS ENGAGED FOR AGRICULTURAL PURPOSES.

## REGULATIONS, 1937.

1. The Highland and Agricultural Society will make Grants to Horse Associations and other Societies in different districts engaging Stallions for agricultural purposes. The total sum expended by the Highland and Agricultural Society in such Grants shall not exceed the sum of £210 in any one year.

2. The portion of the Grant to any one Association or Society shall not exceed the sum of £15 in any one year. It is intended that the Grant shall be used by the Association or Society for the purpose of enabling it to secure a better class of Stallion.

3. The Grant will be available only for Stallions which, for the year to which the Grant applies, are registered in the Register of Certified Draught Stallions published by the Department of Agriculture for Scotland. (For information regarding the Registration



of Stallions, apply to the Secretary of the Department of Agriculture for Scotland, 29 St Andrew Square, Edinburgh.)

4. The Grant will continue for three years provided the Association receiving the Grant shall hire a Registered Stallion in the two intermediate years.

5. In the event of a Horse not being engaged in any one year while the provisions of the Grant are in force, the Grant made by the Highland and Agricultural Society will cease.

6. RULES 2 (Committee and Convener), 10 (Reports), 11 (Time of Payment), 12 (Renewal of Grant), and 13 (Disposal of Applications) applicable to Class 1, shall be applicable to this Class.

### Grants in 1937.

#### 5th and Final Year—GRANT OF £15.

1. TIREE AGRICULTURAL (HEAVY HORSE-BREEDING) SOCIETY.

*Convener*—Archibald Macdiarmid, Island House, Tiree.

*Secretary*—John M. Brown, Scarinish, Tiree.

Granted 1933.

2. CENTRAL BANFFSHIRE FARMERS CLUB.

*Convener*—George A. Morrison, Botary Mains, Cairnie, Huntly.

*Secretary*—John C. Gray, North of Scotland Bank Buildings, Moss Street, Keith.

Granted 1933.

3. CLACKMANNANSHIRE UNION AGRICULTURAL SOCIETY.

*Convener*—Robert M'Goe, Blackfaulds, Alloa.

*Secretary*—G. F. Piggott, 30 Dirleton Gardens, Alloa.

Granted 1933.

4. EAST OF FIFE ENTIRE HORSE SOCIETY.

*Convener*—Thomas Graham, Ballone Farm, St Andrews.

*Secretary*—James Gray, Stravithie Mains, Stravithie, Fife.

Granted 1933.

#### 4th (Intermediate) Year—Grant in Abeyance.

5. VALE OF ALFORD AND ABERDEEN DISTRICT HORSE-BREEDING SOCIETY.

*Convener*—Colonel Harry Forbes, D.S.O., Montgarrie House, Alford, Aberdeenshire.

*Secretary*—James Lawson, Baldyvin, Alford, Aberdeenshire.

Granted 1934.

6. CAITHNESS HORSE-BREEDING ASSOCIATION.

*Convener*—George King, Langwell, Berriedale, Caithness.

*Secretary*—A. G. Doull, Lybster, Caithness.

Granted 1934.

3rd (Alternate) Year—GRANT OF £15.

7. CARSE AND DUNDEE DISTRICT STALLION SOCIETY.

*Convener*—William L. Thoms, Benvie, Invergowrie.

*Secretary*—Joseph Murray, Balruddery Farm, Invergowrie.  
Granted 1935.

8. STRATHAVEN AND GLENLIVET HORSE-BREEDING ASSOCIATION.

*Convener*—James Macdonald, J.P., Achdregnie, Tomnavoulin, Glenlivet.

*Secretary*—Charles Lindsay, J.P., Croughly, Tomintoul.  
Granted 1935.

9. WALLS AND HOY AGRICULTURAL SOCIETY.

*Convener*—James Baillie, Snelsetter, Longhope, Walls, Orkney.

*Secretary*—William Sutherland, The Old Custom House, Longhope, Walls, Orkney.  
Granted 1935.

10. BLACK ISLE HORSE-BREEDING SOCIETY.

*Convener*—Donald Gray, Balrailan Mains, Duncanston, Conon Bridge.

*Secretary*—James MacDonald, Brae Park, Duncanston, Conon Bridge.  
Granted 1935.

2nd (Intermediate) Year—Grant in Abovance.

11. ELLON AND DISTRICT HORSE-BREEDING SOCIETY.

*Convener*—R. P. Ligertwood, J.P., Piltochie, Ellon, Aberdeenshire.

*Secretary*—James A. Ligertwood, Piltochie, Ellon, Aberdeenshire.  
Granted 1936.

12. CENTRAL FORFARSHIRE HORSE-BREEDING SOCIETY.

*Convener*—James Scott, Bonnyton, Inverarity.

*Secretary*—Walter R. Findlay, Mains of Balmadies, Guthrie.  
Granted 1936.

13. ROTHIE MAY HORSE-BREEDING SOCIETY.

*Convener*—James Smart, Cairnwhelp, Cairnie, Huntly.

*Secretary*—Alexander J. Walker, Woodside, Rothiemay, Huntly.  
Granted 1936.

14. WESTRAY HORSE-BREEDING SOCIETY.

*Convener*—William F. Brown, Breckowall, Westray, Orkney.

*Secretary*—Benjamin Bremner, Hilldevale, Westray, Orkney.  
Granted 1936.

15. BUCHLYVIE AND VALE OF MENTEITH HORSE-BREEDING AND STOCK IMPROVEMENT SOCIETY, LTD.

*Convener*—Thomas Syme, J.P., Dundaff, Kippen.

*Secretary*—Miss M. M. Drysdale, 55 Colinton Road, Edinburgh.  
Granted 1936.

## 1st Year—GRANT OF £15.

## 16. STRATHBOGIE FARMER CLUB.

*Convener*—George W. Mitchell, Kirktownmills, Drumblade.*Secretary*—John Stuart, Commercial Bank Buildings, Huntly.  
Granted 1937.

## 17. LORN ENTIRE HORSE SOCIETY.

*Convener*—Donald MacGillivray, Barcaldine Home Farm, Connell, Argyll.*Secretary*—Duncan Mackay, National Bank of Scotland Ltd., Oban.  
Granted 1937.

## 18. ROSS OF MULL HORSE-BREEDING SOCIETY.

*Convener*—P. A. MacKeand, Scoor, Bunessan, Mull.*Secretary*—Donald MacKinnon, Tiraghoil, Bunessan, Mull.  
Granted 1937.

## 19. CAITHNESS CLYDESDALE CLUB.

*Convener*—John Swanson, Banks Lodge, Watten, Caithness.*Secretary*—John Gowans, Janetstown, Wick, Caithness.  
Granted 1937.

## 20. LANARK HORSE-BREEDING SOCIETY.

*Convener*—Robert J. Struthers, Broomfield, Netherburn, Lanarkshire.*Secretary*—Alexander Clarkson, Pretts Mill, Lanark.  
Granted 1937.

## 21. ORKNEY WEST MAINLAND HORSE-BREEDING SOCIETY.

*Convener*—Charles Hourston, Beaquoy Farm, Dounby, Kirkwall.*Secretary*—John G. S. Flett, Nistaben Farm, Harray, Kirkwall.  
Granted 1937.

## CLASS 3.

LOCAL AGRICULTURAL SOCIETIES—GRANTS OF  
SILVER MEDALS IN AID OF PREMIUMS.

## REGULATIONS 1937.

The Society, being anxious to co-operate with local Societies, will give a limited number of Silver Medals annually to Societies (but not concurrently if also in receipt of a Grant under Class 1), in addition to the Money Premiums offered by them, for—

1. Best Bull, Cow, or Heifer of any pure breed specified in Class 1.
2. Best Stallion or Mare of any pure breed specified in Class 1.
3. Best Tup or Pen of Ewes of any pure breed specified in Class 1.
4. Best Boar, Sow, or Breeding Pig of any pure breed.
5. Best Pens of Poultry.
6. Best Sample of any variety of Wool.
7. Best Sample of any variety of Seeds.
8. Best-managed Farm.
9. Best-managed Green Crop.

10. Best-managed Hay Crop.
11. Best-managed Dairy.
12. Best Sweet-Milk Cheese.
13. Best Cured Butter.
14. Best Fresh Butter.
15. Best collection of Roots.
16. Best-kept Fences.
17. Best Sheep-Shearer.
18. Most expert Hedge-Cutter.
19. Most expert Labourer at Draining.
20. Best Maker of Oatcakes.

It is left to the local Society to choose out of the foregoing list the classes to which the Medals are to be allocated.

#### RULES OF COMPETITION.

1. All Competitions must be at the instance of a local Society.
2. The classes for which Medals are granted must be in accordance with the foregoing list. The Local Committee shall select the classes, and specify them in the Report.
3. The offer of the Medals must be announced in the Premium List and Catalogue of the Show as "presented by the Highland and Agricultural Society of Scotland."
4. The Medals are granted for two years, and lapse if not awarded in those years.
5. No Society shall receive more than two Medals in any year.
6. A Committee of Management shall be appointed, and either the Convener of the Committee or the Secretary of the Society **must be a member of the Highland and Agricultural Society of Scotland.**
7. When it is agreed to hold the General Show of the Society in any one of the Show Divisions, no provincial Show may be held in that district in the **three months immediately preceding the date of the General Show. In the event of a Show being held, the entire grant will be cancelled.**
8. The Money Premiums given in the District must be not less than £2 for each Medal offered.
9. The Medal for Sheep-Shearing shall always accompany the highest Money Premium.
10. There must not be fewer than three competitors in all the classes.
11. Regarding Reports and despatch of Medals, Rules 10 and 11, Class 1, will apply.
12. When a grant of Medals has expired, the Society cannot apply again for Medals for two years.

#### Grants in 1937.

##### 2nd Year.

##### 1. LOCKERBIE AGRICULTURAL SOCIETY.

*Convener*—R. Jardine Paterson of Balgray, Lockerbie.

*Secretaries*—Henderson & Mackay, Solicitors, Lockerbie.

(Granted 1936. (2 Medals—Stock.)

## 2. MOULIN AGRICULTURAL ASSOCIATION.

*Convener*—John S. H. Brander, West Winds, Pitlochry.*Secretary*—Buckham W. Liddell, W.S., Pitlochry.

Granted 1936. (1 Medal—Green Crop.)

## 1st Year.

## 3. CARNWATH AGRICULTURAL SOCIETY.

*Convener*—Andrew S. Lawson, Guildhouse, Forth.*Secretary*—A. M. White, Commercial Bank of Scotland Ltd., Carnwath.

Granted 1936. (2 Medals—Stock.) (Grant in abeyance 1936.)

## 4. UPPER DONSIDER AGRICULTURAL SOCIETY.

*Convener*—James Strachan, New Mains, Towie, Glenkindie, Aberdeenshire.*Secretary*—Alexander Kellas, Cushnie, Alford, Aberdeenshire.

Granted 1937. (2 Medals—Stock.)

## CLASS 4.

## SPECIAL GRANTS—1937.

## (1) ANNUAL.

## 1. AYRSHIRE AGRICULTURAL ASSOCIATION, £20, to be competed for at the Dairy Produce Show at Kilmarnock.

*President*—H.R.H. The Duke of Gloucester.*Convener of Dairy Show Committee*—William M'Fadzean, 35 Dundonald Road, Kilmarnock.*Secretary*—James A. Paterson, 17 Kyle Street, Ayr.

Granted 1872.

## 2. BRITISH DAIRYMAIDS' ASSOCIATION.

*Hon. President*—Mrs William Meiklem, Bennoch Park, Kirkcaldy.*President*—Mrs John W. Prentice, Craigrie Farm, Clackmannan.*Hon. Secretary*—Mrs D. G. More, 16 Rutland Square, Edinburgh 1.

1 Minor Gold Medal and 1 Medium Silver Medal for Champion Buttermaking Competitions at the Scottish National Fat Stock Club Show, Edinburgh.

Granted 1908.

## 3. NORTHERN COUNTIES ARTS AND CRAFTS SOCIETY, £20.

*Convener*—Miss Mackintosh of Raigmore, Raigmore, Inverness.*Joint-Secretaries*—Mrs Mitford, Berryfield, Lentrane, and Miss Ruth Mackintosh, Raigmore, Inverness.

Granted 1922.

4. NORTH OF SCOTLAND COLLEGE OF AGRICULTURE.

*Secretary*—R. M. Lemmon, B.L., Crown Mansions, 41½ Union Street, Aberdeen.

3 Silver Medals (1 Large, 1 Medium and 1 Minor)—1st, 2nd, and 3rd Prizes respectively—for *Sir John Fleming Cup* Stackyard Competition.

Granted 1925.

5. SCOTTISH NATIONAL UNION OF ALLOTMENT HOLDERS.

*Secretary and Treasurer*—Archibald W. Fisher, Solicitor, 18 Hill Street, Edinburgh.

£15 and 15 Medium Silver Medals for best Allotments.

Granted 1927.

6. GALLOWAY DAIRY PRODUCE SHOW SOCIETY, £12. to be competed for at the Dairy Produce Show at Castle Douglas.

*President*—Walter C. Crawford, Chapmanton, Castle Douglas.

*Secretary*—Patrick Gifford, Royal Bank Offices, Castle Douglas.

Granted 1936.

(2) IN ALTERNATE YEARS.—GRANTS IN 1937.

7. ORKNEY AGRICULTURAL SOCIETY, £3.

*Convener*—George Learmonth, Pow, Sandwick, Orkney.

*Joint-Secretaries*—D. Flett and J. C. Croy, Junction Road, Kirkwall.

Granted 1883.

8. EAST MAINLAND AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—William G. Smith, Hall of Tankerness, Tankerness, Orkney.

*Secretary*—Alfred C. Tait, Quoyburray, Tankerness, Orkney.

Granted 1898.

9. WEST MAINLAND AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—Peter H. Johnston, Dale, Evie, Orkney.

*Secretary*—James Wood, Garson, Sandwick, Orkney.

Granted 1900.

10. SANDAY AGRICULTURAL ASSOCIATION, ORKNEY, £3.

*Convener*—W. Cowper Ward, Sear House, Sanday, Orkney.

*Secretary*—John Wallace, Prattsfauld, Sanday, Orkney.

Granted 1902.

11. YELL AGRICULTURAL SOCIETY, SHETLAND, £3.

*Convener*—T. R. Manson, Ladybank, West Sandwick, Lerwick.

*Secretary*—Robert Johnston, The Manse, West Sandwick, Lerwick.

Granted 1931.

## (3) IN ALTERNATE YEARS.—GRANTS IN ABEYANCE, 1937.

## 12. ROUSAY AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—R. S. Mainland, Nearhouse, Rousay, Orkney.*Secretary*—John Linklater, Blossom, Sourin, Rousay, Orkney.

Granted 1903.

## 13. SOUTH RONALDSHAY AND BURRAY AGRICULTURAL SOCIETY, ORKNEY, £3.

*Convener*—John Omand, Hall of Hoxa, St Margaret's Hope, Orkney.*Secretary*—George S. Esson, St Margaret's Hope, Orkney.

Granted 1904.

## 14. SHAPANSEY AGRICULTURAL ASSOCIATION, ORKNEY, £3.

*Convener*—William T. Wood, Balfour Mains, Shapansay, Orkney.*Secretary*—D. L. Kemp, Bayview, Shapansay, Orkney.

Granted 1934.

## CLASS 5.

FEDERATIONS OF SCOTTISH WOMEN'S RURAL  
INSTITUTES—GRANTS OF £10.

## REGULATIONS, 1937.

1. A sum not exceeding £150 in each year will be given in special Grants to Federations of Scottish Women's Rural Institutes. The amount of the Grant to a Federation shall not exceed £10 per annum.

2. A Federation which has received a Grant for two consecutive years shall not be eligible to apply for a renewal of the Grant until after the expiry of two years.

## Grants in 1937.

## 2nd Year.

## 1. RENFREWSHIRE FEDERATION.

*Convener*—The Lady Alice Shaw-Stewart, Ardgowan, Inverkip, Renfrewshire.*Secretary*—Mrs Scott, Alexandra Place, Inverkip, Renfrewshire.

Granted 1935. (Grant in abeyance 1935—postponed.)

## 2. WIGTOWNSHIRE FEDERATION.

*Convener*—Mrs Graham, Monreith, Whauphill, Wigtownshire.*Secretary*—Miss Sowerby-Niven, Fairseat, Sorbie, Wigtownshire.

Granted 1935. (Grant in abeyance 1936—postponed.)

## 3. ABERDEENSHIRE FEDERATION.

*Convener*—Mrs Couper, Logie, Pitcaple, Aberdeenshire.*Secretary*—Miss Helen D. Ross, 25 Crown Street, Aberdeen.

Granted 1936.

## 4. BUTE, ISLE OF, FEDERATION.

*Convener*—Mrs Constable, The Foley, Rothesay.*Secretary*—Miss M. Gray Buchanan, Ettrickdale, Port Bannatyne, Isle of Bute.

Granted 1936.

## 1st Year.

## 5. ARRAN, ISLE OF, FEDERATION.

*Convener*—Mrs Currie, Alma Terrace, Brodick.*Secretary*—Mrs Dodds, The Schoolhouse, Brodick.

Granted 1937.

## 6. CAITHNESS FEDERATION.

*Convener*—Mrs Gore-Browne Henderson of Bilbster, Wick, Caithness.*Show Secretary*—Miss A. S. M'I. Bain, Bowermadden, Bower, Wick, Caithness.

Granted 1937.

## 7. MORAY AND NAIRN FEDERATION.

*Convener*—The Hon. Mrs Campbell, Auchindoun, Cawdor, Nairn.*Secretary*—Miss J. S. Robertson, 74 Main Street, New Elgin, Moray.

Granted 1937.

## 8. ORKNEY FEDERATION.

*Convener*—Mrs Work, Craigiefield House, St Ola, Kirkwall.*Secretary*—Miss C. Scarth, Twatt, Kirkwall.

Granted 1937.

## 9. PERTHSHIRE AND KINROSS-SHIRE FEDERATION.

*Convener*—Mrs Gardner, Barony Mansie, Auchterarder.*Secretary*—Mrs Methven, St Martin's Abbey, Perth.

Granted 1937.

## 10. STIRLING AND WEST PERTH FEDERATION.

*Convener*—Mrs Macdiarmid, Oakbank, Kippen.*Secretary*—Miss E. Baird, Sunnybrae, Avonbridge, Stirling-shire.

Granted 1937.

## 11. SUTHERLAND FEDERATION.

*Convener*—Mrs Serjeantson, Troughend, Brora.*Secretary*—Miss Sutherland, Rosebank, Brora.

Granted 1937.

## Grant in Abeyance, 1937.

## 12. FIFE FEDERATION.

*Convener*—Miss L. J. Rintoul, Balsusney, Upper Largo.*Secretary*—Mrs Swanston, Carnbee Schoolhouse, Pittenweem.

Granted 1936. (Grant in abeyance 1937—postponed.)



**GROUP III.—COTTAGES AND GARDENS, &c.**

The following Premiums are offered for Competition.

The Premiums are granted for two years.

**CLASS 6****LOCAL SOCIETIES, &c.—GRANTS FOR BEST-KEPT  
COTTAGES AND GARDENS.**

1. Best-kept Cottage	.	.	.	.	.	.	£1	0	0
Second best	.	.	.	.	.	.	0	10	0
2. Best-kept Cottage Garden	.	.	.	.	.	.	1	0	0
Second best	.	.	.	.	.	.	0	10	0

*Forms of application may be obtained from the Secretary, and should be completed and returned on or before 1st November next, in respect of a Grant commencing in the following year.*

**RULES OF COMPETITION.**

1. Competitions may take place in the different parishes for Cottages and Gardens, or for either separately.

2. The occupiers of Lodges at Gentlemen's Approach Gates and Gardeners' Houses are excluded, as well as others whom the Committee consider, from their position, not to be entitled to compete. The inspection must be completed by the 1st of October. In making the inspection, the Conveners may take the assistance of any competent judges.

3. It shall be left to the Committee in the District to fix two grades of Cottages, with maximum rents of £10 and £16 respectively, and to apply for £3 Grants in respect of each.

4. To warrant the award of full Premiums, there must not be fewer than three Competitors in each class. If there are less than three competitors in each class, only half Premium will be awarded.

5. A person who has gained the highest Premium cannot compete again.

6. If the Cottage is occupied by the proprietor, the roof must be in good repair; if the roof is thatch, it must be in good repair, though in the occupation of a tenant. The interior and external conveniences must be clean and orderly; the windows must be free of broken glass, clean, and affording the means of ventilation. Dung-hills, and all other nuisances, must be removed from the front and gables. In awarding the Cottage Premiums, preference will be given to Competitors who, in addition to the above requisites, have displayed the greatest taste in ornamenting the exterior of their houses, and the ground in front and at the gables.

7. In estimating the claims for the Garden Premiums, the judges should have in view—the sufficiency and neatness of the fences and walks; the cleanness of the ground; the quality and choice of the crops; and the general productiveness of the garden.

8. Reports, stating the number of Competitors, the names of successful parties, and the nature of the exertions which have been made by them, must be lodged with the Secretary of the Highland and Agricultural Society *on or before 1st November next.*

9. When a grant of Money has expired, the District cannot apply again for aid for four years.

### Grants in 1937.

#### 2nd Year.

##### 1. TORPHINS HORTICULTURAL AND INDUSTRIAL SOCIETY.

*Convener*—Andrew Reid, The Square, Torphins, Aberdeenshire.

*Secretary*—Edward Malcolm, Woodville, Torphins, Aberdeenshire.

Granted 1936.

##### 2. BENBECULA HORTICULTURAL SOCIETY.

*Convener*—Mrs Paterson, Sorelle Lodge, Benbecula, South Uist.

*Secretary*—John Macmillan, Fernfield, Griminish, Benbecula, South Uist.

Granted 1936.

#### 1st Year.

##### 3. COLINSBURGH AND KILCONQUHAR HORTICULTURAL ASSOCIATION.

*Convener*—Gilbert R. M'Garva, Bahniel, Colinsburgh, Fife.

*Secretary*—William Adams, Balcarres Gardens, Colinsburgh, Fife.

Granted 1937.

### CLASS 7.

LOCAL SOCIETIES, &c.—GRANTS OF MINOR SILVER MEDALS FOR BEST-KEPT COTTAGES AND GARDENS, GARDEN PRODUCE, POULTRY, AND HONEY.

#### RULES OF COMPETITION.

1. The Society will give annually one or two Minor Silver Medals to a limited number of local Associations or individuals, who establish Competitions and Premiums for Cottages, Gardens, Garden Produce, or Bee-Keeping. The Medals will be granted for two years.

2. The Medals may be offered in any two of the following sections, *but under no circumstances will the two Medals be given in one of the sections :—*

- (1) Best-kept Cottage or best-kept Cottage and Garden. (One Medal only.)
- (2) Best-kept Garden. (One Medal only.)
- (3) Best Collection of Garden Produce—Flowers excluded. (One Medal only.)
- (4) Best Pen of Poultry. (One Medal only.)
- (5) Honey. (One Medal only.)

3. The annual value of each cottage, with the ground occupied in the parish by a Competitor, must not exceed £20. The occupiers of Lodges at Gentlemen's Approach Gates, and Gardeners in the employment of others, are not entitled to compete.

4. If Competition takes place for Garden Produce, such produce must be *bona fide* grown in the Exhibitor's Garden. He will not be allowed to make up a collection from any other Garden. The produce must consist of Vegetables, or Vegetables and Fruit (not Fruit alone). Flowers are excluded.

5. The Honey must be the produce of the Exhibitor's own Hives.

6. To warrant the award of a Medal, there must not be fewer than three Competitors.

7. Forms of Report of Competitions will be furnished to the Secretaries in the different Districts. These must, in all details, be completed and lodged with the Secretary of the Highland and Agricultural Society as soon as possible after the Competition, and in no case later than *1st November*, for the approval of the Directors, against whose decisions there shall be no appeal.

8. If no Competition takes place in a District for two years the grant expires.

9. When a grant of Medals has expired, the District cannot apply again for aid for two years.

### Grants in 1937.

#### 2nd Year.

##### 1. SPRINGSIDE HORTICULTURAL AND AGRICULTURAL ASSOCIATION.

*Convener* - Alexander Johnston, M.A., The Schoolhouse, Springside, Kilmarnock.

*Secretary* - William Williamson, 21 Springhill Terrace, Springside, Kilmarnock.

(Granted 1935. (2 Medals.) (Grant in abeyance 1936.)

##### 2. TORPHINS HORTICULTURAL AND INDUSTRIAL SOCIETY.

*Convener* - Andrew Reid, The Square, Torphins, Aberdeenshire.

*Secretary* - Edward Malcolm, Woodville, Torphins, Aberdeenshire.

Granted 1936. (2 Medals.)

##### 3. BENBECULA HORTICULTURAL SOCIETY.

*Convener* - Mrs Paterson, Sorelle Lodge, Benbecula, South Uist.

*Secretary* - John Macmillan, Fernfield, Griminish, Benbecula, South Uist.

Granted 1936. (2 Medals.)

#### 1st Year.

##### 4. NORTH UIST AGRICULTURAL SOCIETY.

*Convener* - Captain R. M'Erlich, Lochmaddy.

*Secretary* - Peter Morrison, J.P., Sollas, Lochmaddy.

Granted 1937. (2 Medals.)

##### 5. GLASGOW DISTRICT BEEKEEPERS' ASSOCIATION.

*Secretary* - Mrs Shepherd, Greenfield, Newton Mearns.

Granted 1937. (1 Medal.)

## GROUP IV.—PLOUGHING, HOEING, AND LONG FARM SERVICE.

### 1. MEDALS FOR PLOUGHING COMPETITIONS.

The Ploughing Medal will be given to the winner of the first Premium at Ploughing Competitions, provided a Report in the following terms on the official form is made to the Secretary, within one month of the Competition, by a Member of the Society. Forms of Report to be had on application.

#### FORM OF REPORT.

I, \_\_\_\_\_ of \_\_\_\_\_, Member of the Highland and Agricultural Society, hereby certify that I attended the Ploughing Match of the \_\_\_\_\_ Association at \_\_\_\_\_ in the county of \_\_\_\_\_ on the \_\_\_\_\_ when \_\_\_\_\_ ploughs competed ; \_\_\_\_\_ of land were assigned to each, and \_\_\_\_\_ hours were allowed for the execution of the work. The sum of £ \_\_\_\_\_ was awarded as follows :—

*[Here enumerate the names and designations of successful Competitors.]*

#### RULES OF COMPETITION.

1. All Matches must be at the instance of a Local Society or Ploughing Association, and no Match at the instance of an individual, or confined to the tenants of one estate, will be recognised.

2. The title of such Society or Association, together with the name and address of its Secretary, must be registered with the Secretary of the Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh.

3. Not more than one Match in the same season can take place within the bounds of the same Society or Association.

4. All reports must be lodged within one month of the date of the Match, and certified by a Member of the Highland and Agricultural Society who was present at it.

5. A Member can report only one Match ; and a Ploughman cannot carry more than three Medals in the same season.

6. To warrant the grant of the Medal, there must have been 12 Ploughs in actual competition for the medal (*i.e.*, in the particular class for which the medal was offered) and not less than £3 awarded in Prizes by the Local Society. The Medal to be given to the winner of the first prize.

7. The Local Society or Ploughing Association shall decide what class of ploughs shall compete for the Medal, and if so agreed, may offer it for competition to the class of plough most generally in use in the district.

8. The Local Society or Committee may, if they desire, arrange to let each Ploughman have one person to guide the horses for the first two and the last two furrows, but in no case shall Ploughmen receive any other assistance, and their work must not be set up or touched by others. Attention should be given to the firmness and sufficiency of the work below, more than to its neatness above the surface.

9. The Local Committee is required to fix the time to be allowed for ploughing the portion of land, and they are recommended that the time be at the rate of not more than fourteen hours per imperial acre on light land, and eighteen hours on heavy or stony land.

NOTE.—The attention of the Directors of the Society has frequently been drawn to certain irregularities which have occurred in connection with the conduct of Ploughing Matches and the completion of the Reports thereon. Complaints have been made (a) that the allotted amount of ground has not been ploughed, within the specified time, by the competitor awarded the first prize; (b) that the Report sent to this Society has been signed by a Member of the Society who was not present at the Match. It has to be pointed out that any infringement of the above Rules by a Local Society or Ploughing Association will render that Society or Association liable, at the discretion of the Board of Directors, to be debarred from receiving the Society's Medals.

## 2. MEDALS FOR HOEING COMPETITIONS.

The Minor Silver Medal will be given to the winner of the first Premium at Hoeing Competitions, provided a Report on the official form is made to the Secretary within a month of the Competition by a Member of the Society. Forms of Report to be had on application.

### RULES OF COMPETITION.

1. All Matches must be at the instance of a Local Society or Hoeing Association, and no Match at the instance of an individual, or confined to the tenants of one estate, will be recognised.

2. The title of such Society or Association, together with the name and address of its Secretary, must be registered with the Secretary of the Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh.

3. Not more than one Match in the same season can take place within the bounds of the same Society or Association.

4. All reports must be lodged within one month of the date of the Match, and certified by a Member of the Highland and Agricultural Society who was present at it.

5. A Member can only report one Match; and same Competitor cannot carry more than three Medals in the same season.

6. To warrant the grant of the Medal there must have been twelve hoes in Competition, and not less than Three Pounds awarded in prizes by the Local Society or Association. The Medal to be given to the winner of the first prize.

7. The time to be allowed to be decided by the local Committee, but in no case to exceed two hours for two drills of 100 yards each, the third drill being unoccupied, so that Competitors do not interfere with their neighbour's work.

8. Competitors must finish their work as they go along—no turning back or after-dressing allowed. Hand-picking or transplanting shall be strictly prohibited.

9. A Committee shall be appointed to watch the work, and any Competitor found transplanting or otherwise not complying with the Rules shall have his number withdrawn, and be debarred from receiving any prize which might otherwise have been awarded to him.

NOTE.—Medals will be awarded under similar conditions for Competitions in hand-singling.

### 3. CERTIFICATES AND MEDALS FOR LONG FARM SERVICE.

Certificates and Silver Medals for long service will be awarded by the Society to farm servants, male or female, having an approved service in Scotland of not less than thirty years (not necessarily continuous) —(a) with one employer on the same or different holdings ; (b) on the same holding with different employers.

Special Certificates and Gold Medals are also awarded to farm servants, male or female, having an approved service in Scotland of not less than forty-five years (not necessarily continuous), on similar conditions of employment as the above.

Forms of Application are obtainable from the Secretary, 8 Eglinton Crescent, Edinburgh.

War Service to count towards the time required for qualification, where farm servants have returned to same service or employment with same farmer or his family.

Estate workers, such as Foresters, Carters, Grooms, &c., are not eligible. The award is strictly confined to **Farm** workers, such as Ploughmen, Shepherds, &c.



**NOTE.—From 15th to 24th June all communications for the Secretary should be addressed to him at the Secretary's Office, Showyard, Alloa Park, Alloa.**

*Address for Telegrams*—"SOCIETY," EDINBURGH.

*Telephone No* —EDINBURGH 23655.

## HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

**GENERAL SHOW OF STOCK, IMPLEMENTS,  
MACHINERY, ETC.**

**ALLOA**

22ND, 23RD, 24TH, AND 25TH JUNE 1937.

### *LAST DAYS OF ENTRY.*

IMPLEMENTS AND OTHER ARTICLES—Monday, 5th April.

NEW IMPLEMENTS—Monday, 5th April.

FLOWER SHOW—Saturday, 24th April.

CATTLE, HORSES, SHEEP, GOATS, AND PIGS—Wednesday, 28th April.

DRAUGHT GELDINGS IN HARNESS—Tuesday, 15th June.

*(Separate Form for EACH Entry.)*

DAIRY PRODUCE, RURAL INDUSTRIES, AND HORSE-SHOEING AND  
SHOE-MAKING—Wednesday, 28th April.

POULTRY—Wednesday, 12th May.

LIVE STOCK JUDGING COMPETITION—Thursday, 13th May.

HONEY and BUTTERMILK COMPETITIONS—Thursday, 20th May.

### *President of the Society.*

THE EARL OF MAR AND KELLIE, K.T.

### *Chairman of the Board of Directors.*

J. P. ROSS-TAYLOR, MUNGOSWALLS, DUNS.

### *Convenor of the Local Committee.*

JAMES R. LUMSDEN OF ARDEN, DUMBARTONSHIRE.

### *Convenor of the Shows Committee.*

J. E. KERR OF HARVIESTOUN, DOILAR.

**The District connected with the Show comprises the Counties of Clackmannan, Dumbarton, Perth (Stirling Show Division), and Stirling.**



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## REGULATIONS.

### GENERAL CONDITIONS.

1. The Competition, except where otherwise stated in the Premium List, is open to Exhibitors from all parts of Great Britain, Northern Ireland, and Irish Free State.

2. Every Lot must be intimated by a Certificate of Entry, lodged *Entries.* with the Secretary *not later than Monday, 5th April, for Implements, New Implements, and other Articles ; Saturday, 24th April, for Flower Show ; Wednesday, 28th April, for Stock, Dairy Produce, Rural Industries, and Horse-shoeing and Shoe-making ; Wednesday, 12th May, for Poultry ; Thursday, 13th May, Live Stock Judging Competition ; Thursday, 20th May, for Honey, and Buttermaking Competitions ; Tuesday, 15th June, Draught Geldings in Harness.* Printed forms of Entry will be issued on application to the Secretary, No. 8 Eglinton Crescent, Edinburgh 12. Admission Orders for Exhibits and Attendants will be forwarded to Exhibitors, by post, previous to the Show.

Between 28th April and 27th May an Exhibitor who has made, in due time, an entry of Horses, Cattle, Sheep, Goats, or Pigs, in a particular class, will be permitted to substitute for it an entry of another animal in the *same class* on payment of a fee of Five Shillings each entry. *Substitution of Entry in same Class.*

3. This Premium List is published and the Show will be held subject to any Orders that may be issued by the Ministry of Agriculture or Local Authorities. Any licences that may be required for the movement of Stock into or away from the Show must be obtained by Exhibitors. For these licences application should be made to the Chief Constable, Alloa. *Licences for moving Stock.*

4. Animals suffering from any form of infectious or contagious disease—including ringworm or other form of infectious or contagious skin ailment—must not be brought to the Show. Those infringing this Rule shall be liable to a fine of 40s., and to have their Stock removed. *Diseased Animals.*

The Steward of Horses shall have power to require that any animal showing symptoms of cold be examined by the Veterinary Surgeon, and, if found to be so suffering, the animal shall be isolated or excluded from the Showyard. *Horses suffering from cold.*

5. No Entry can be received or recorded unless it is accompanied by the necessary fees, and complies fully with the Regulations in the Premium List, the Secretary being empowered to return entries sent without the necessary fees. *Fees to accompany Entries.*

6. The Schedule of Entry must be filled up so far as within the knowledge of the Exhibitor. The Society shall have power at any time to call upon an Exhibitor to furnish proof of the correctness of any statement in his entry. *Particulars of Entries.*

7. The name of the Breeder, if known, must be given, and if the Breeder is not known, a declaration to that effect, signed by *Name of Breeder.*

the Exhibitor, must be made on the Entry Schedule, and no pedigree will be entered in the Catalogue when the Breeder is unknown.

*No Substitution of Animals.*

8. All animals, except calves, foals, and lambs shown with their dams, must be entered in the classes applicable to them, and cannot be withdrawn after entry, or other animals be substituted in their place, except as provided in Rule 2.

*One Class only.*

9. For Prizes given by the Society, no animal shall be allowed to enter in more than one class, or to compete in any class except that prescribed for animals of its pedigree and description; but this Rule does not apply to the Jumping Classes.

*Ownership*

10. All stock exhibited at the Show, except where otherwise stated in the Premium List, must be, at the time of entry, the *bona fide* property of the Exhibitor in whose name it is entered.

*Responsibility for Entries.*

11. Exhibitors are alone responsible for the accuracy and eligibility of their entries. The recording of an entry or the admission of the exhibit to the Showyard will not relieve the Exhibitor of this responsibility. The entry fee paid for an animal entered in a class for which it is not eligible is not returnable.

*Cancelling of Entries.*

12. In the event of the entries in any section of Cattle, Horses, Sheep, Goats, or Pigs being less in number than an average of three per class, or the number of different Exhibitors in the section being less than three, the classes for that section shall be cancelled automatically for the year and the entry fees returned.

*Society not liable.*

13. The Society shall not be liable for any loss or damage which Stock, Poultry, Dairy Produce, &c., Implements, or other articles may sustain at the Show, or in transit.

*Disqualified Exhibitors.*

14. The Society reserve to themselves the right of refusing, cancelling, or prohibiting the exhibition of entries from any person who, after 1st January 1904, has been expelled from the membership of any Agricultural or Dairy Society, or who may have been prohibited, suspended, or disqualified from making entries or exhibiting at the Show or Shows of any Agricultural or Dairy Society or Breed Society in consequence of having attempted to obtain a Prize by giving a false Certificate, or by other unfair means, or who is under exclusion from any Breed Society for fraudulent practices.

*Animal Disqualified.*

15. When an animal has previously been disqualified by the decision of any Agricultural or Breed Society in the United Kingdom, such disqualification shall attach, if the Exhibitor, being aware of the disqualification, fail to state it, and the grounds thereof, in his entry, to enable the Directors to judge of its validity.

*Tampering with Animals.*

16. Any artificial contrivance or device of any description found on or proved to have been used on an animal, either for preventing the flow of milk or for any other improper purpose, will disqualify that animal from being awarded a Premium, and the Owner of said animal may be prohibited from again entering Stock for any of the Society's General Shows, for such a period as the Directors may see fit.

*Blindfolding Horses. Rejecting Entries.*

17. Horses shall not be blindfolded while being shown in the Ring.  
18. The Society further reserve to themselves the right of refusing any entries they may think fit to exclude, or to cancel any entry made, or to prohibit the exhibition of any entry.

*Control of Exhibits.*

19. Stock entered for competition, and actually in the Show, is subject to the control and under the orders of the Stewards, Secretary, and other Show officials of the Society, and such stock may not be withdrawn from competition without the consent of the Stewards or Secretary.

20. Persons making insulting remarks to, or in any way unduly interfering with, the Judges, Stewards, or other officials while in the performance of their duties, and all Exhibitors or others in charge of stock while in the Judging Rings refusing to accept or display tickets, rosettes, &c., awarded by the Judges, and handed to them by the Stewards or other officials, or tearing up tickets, rosettes, &c., so awarded and handed to them, or indulging in any similar conduct, shall be considered guilty of misconduct, and shall be dealt with under these rules. *Improper Conduct.*

21. All persons in charge of stock or other exhibits, and all persons admitted into the Showyard, shall be subject to the rules of the Society, and shall obey the orders of the Stewards, Secretary, and other officials of the Society. Exhibitors shall be answerable for the conduct of their servants or representatives. *Subject to Orders.*

The Stewards and other officials have power to enforce the Regulations of the Society in their different departments. *Power of Officials.*

22. A protest having reference to exhibits at the Show may be lodged by any person having interest. Protests having reference to competitions which take place on the first day of the Show must be lodged in writing with the Secretary at his Office in the Showyard not later than 9 A.M. on Wednesday, the second day of the Show, and parties must be in attendance at the Secretary's Office in the Showyard at 9.30 A.M. that day, when protests may be disposed of. Protests relating to competitions taking place after the first day of the Show must be lodged before 5 P.M. on the day on which the particular exhibition takes place. Each protest must state specifically the grounds of objection, and must be accompanied by a deposit of £2, 2s., which deposit may, if the objection be proved frivolous to the satisfaction of the Directors, be forfeited. Protests may be lodged at any time by Directors, and in this case no deposit will be required. Protests will be heard and determined by the Directors. Protests on veterinary grounds not received. *Protests.*

23. The violation of any one of the Regulations, or disobedience of the orders of the Directors, Stewards, Secretary, or other officials of the Society, shall render the offending person liable to the forfeiture of all Premiums awarded to him, or of such a portion as the Directors may ordain, and also liable to be expelled from the membership of the Society, and disqualified from again, or for a certain number of years, exhibiting at the Shows of the Society, or to have his case disposed of by fine or otherwise as the Directors may determine. *Penalties for Offences.*

24. The decision of the Directors shall, in every matter arising at or in connection with the Show, be final; and every person present at the Show, whether as a Judge, Exhibitor, Visitor, or otherwise, shall be deemed thereby to have agreed to refer the subject-matter of such decision to the final determination of the Directors to the exclusion of all Courts of Law. *Final Authority.*

25. All decisions under these Rules may, along with the names and addresses of the persons against whom such decisions have been pronounced, be communicated by the Secretary of this Society to the Secretaries of all Agricultural or Dairy Societies holding open Shows in the United Kingdom, and to the Secretaries of all Breed Societies in the United Kingdom, and may be published in the Annual Reports of this Society, and in such newspapers or journals as the Directors may determine; and every Exhibitor competing at the Show, and every person present at the Show, whether as a Director, Member of Committee, Steward, Judge, Exhibitor, Visitor, or otherwise, shall *Intimating Decisions.*

be deemed thereby to have consented to such communication and publication.

*Former  
Winners  
as Extra  
Stock.*

26. An animal to which a first Premium has been awarded, even if it should not qualify for that Premium, or an animal which subsequently becomes entitled to a first Premium, at a General Show of the Society, cannot again compete in the same class, notwithstanding any alteration in the heights stated for such class, but may be exhibited as Extra Stock (see page 126).

*Herd-  
books.*

27. Shorthorn, Aberdeen-Angus, Galloway, Belted Galloway, Highland, and British Friesian cattle must be entered in the herd-books—Ayrshire Cattle in the herd-book or any Appendices thereto—or the Exhibitor must produce evidence that his animal is eligible to be entered therein. Dun Galloways entered in the ordinary Galloway Classes must be registered in, or eligible for entry in, the Galloway Cattle Society's herd-book.

*Height of  
Horses.*

28. All Horses or Ponies entered in classes in which a particular height is stated shall, before being judged, be measured with their shoes on. No subsequent measuring or alteration of shoes will be permitted. In the case of Highland and Western Island Ponies, these may be measured without shoes the height limit in such cases being reduced by quarter of an inch.

*Weight of  
Shoes.*

29. Exhibitors of Hackney and Harness Horses shall be required to adhere to the Rules and Regulations of the Hackney Horse Society with regard to the weight of shoes on their exhibits, the Society's Veterinary Inspector being instructed to examine all the Hackneys and Harness Horses on the second morning of the Show and see that the following Rules as to the weight of shoes are attended to—viz., (a) For Hackneys exceeding 14 hands (except Hackney yearling colts and Hackney yearling fillies), no shoe (nails included) may exceed 2 lb. in weight; (b) for Ponies not exceeding 14 hands, Hackney yearling colts and Hackney yearling fillies, no shoe (nails included) may exceed 1½ lb. in weight.

*Overfeed-  
ing.*

30. Breeding Stock must not be shown in an improper state of fatness, and the Judges are requested not to award Premiums to overfed animals. No Cattle which after the age of twelve months have been exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes until one year after being so shown, and then only with calf at foot. No Sheep which after the age of twelve months have been exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes.

*Sires.*

31. Aged Bulls and Stallions must have had produce, and, along with two-year-old Bulls, three-year-old Colts, and two-shear and aged Tups, have served within the twelve months immediately preceding the Show.

*Calving  
Cows.*

32. Except as may be otherwise specially provided in this Premium List, cows of all breeds (other than Ayrshire and British Friesian) must have had a live or full-time calf on or after 1st September of the year preceding the year of the Show, and before the first day of the Show, and when exhibited must be in milk. Cows of the Ayrshire and British Friesian breeds must have had a live or full-time calf within fifteen months previous to the Show. *Animals of any age that have had a calf must be shown as Cows.*

*In-calf  
Heifers.*

33. Two-year-old Heifers of the Shorthorn, Aberdeen-Angus, Galloway, Belted Galloway, Ayrshire, and British Friesian breeds, and three-year-old Highland Heifers, must be in calf when exhibited, and the Premiums will be withheld till birth be certified, which must be within nine months after the Show.

34. A Mare entered in a class for "Mares with foal at foot" must have produced a foal after 1st January of the year of the Show, must have regularly nursed her own or another foal, and must (except where otherwise provided) have the foal with her in the Show. If the mare's own foal is alive it must be the foal shown with the mare. In the case of a Mare that has not foaled before the Show, or whose foal has died, she shall, if not in milk, be eligible without further entry to compete among the Yeld Mares if a corresponding class for Yeld Mares be included in the Premium List. Draught Yeld Mares must produce a foal not later than 1st August of the year following the year of the Show. A Mare in a class for "Mares or Geldings" may or may not have had a foal in the year of the Show, but shall not have her foal exhibited with her, nor be in milk at the time of the Show.

35. All Sows born in or before 1935 must have produced a litter of pigs in the year of the Show before the opening day. Sows born between 1st January and 1st September 1936 must either have produced a litter of pigs before the Show, or produce a litter within three months of the last day of the Show. Certificates of the date of farrowing must be supplied in every case.

36. With reference to Regulation 33, birth of a live or full-time calf must be certified; and in regard to Regulation 34, birth of at least a nine months' foal; or in the case of the death of the dam, a Veterinary Surgeon's certificate must be produced certifying that at the time of death the animal was so far advanced with calf or foal that if it had lived it would have produced a full-time calf or foal within the periods stated in Regulations 33 and 34. Certificates required by the foregoing Regulations will be issued after the Show, and must reach the office of the Secretary as follows: calving certificates within ten months, foaling certificates within thirteen months, and farrowing certificates within four months, of the last day of the Show. In default of this, the animal will be regarded as having failed to fulfil the Regulations, and the Prize will therefore pass to the animal next in order of merit or be forfeited.

37. Except when otherwise provided, the awards of Special Prizes shall not be subject to the Regulations as to calving, foaling, and farrowing.

38. The Premiums awarded, except those withheld till birth of calf or foal or litter of pigs is certified, will be paid as soon after the Show as practicable, and, with the exception of the Tweeddale Gold Medal, Special Cups, and Medals, may be taken either in money or in plate.

39. No Stallion or entire Colt, two years old or upwards, shall be allowed to compete for any of the Society's Prizes unless it has previously been licensed for stud purposes during the current year by the Department of Agriculture for Scotland, the Ministry of Agriculture and Fisheries, or the Irish Departments of Agriculture.

40. Judges are particularly requested to satisfy themselves, as far as possible, regarding the soundness of all Horses before awarding the Prizes, and to avoid giving Prizes to animals showing symptoms of hereditary disease. The Judges may consult the Society's Veterinary Surgeon if they deem it expedient. Private accommodation is provided for the examination of horses by the Veterinary Surgeon. No protests on veterinary grounds will be received.

41. Every Ewe must have given birth to and reared a lamb in the year of the Show; and Ewes of the Blackface and Cheviot breeds must be in milk, and have their lambs at foot.

*Mares.**Sows.**Calves and  
Foals.  
Calving,  
Farrowing,  
and Foal-  
ing Cer-  
tificates.**Special  
Prizes.**Payment  
of Prizes.**Veterinary  
Examina-  
tion of  
Stallions  
and Colts.**Soundness  
of other  
Horses.**Accommo-  
dation for  
Examina-  
tion.**Ewes.*

**Milking.** 42. Animals in milk of the Dairy breeds must be milked dry at 6 o'clock on the evening previous to the opening of the Show in the presence of, and to the satisfaction of, the Steward of Cattle or a representative of the Society duly authorised by him. Animals arriving after six o'clock will be milked dry at the time of arrival.

All animals in milk, in the Ayrshire Cattle Classes, must be milked out in the ring before the awards are made.

**Clipping.** 43. Sheep must have been clipt bare after the first day of the November preceding the Show, no part of the animal to be clipt prior to that date—this Rule not to apply to Cheviot Sheep and Oxford Down Sheep.

No Blackface Sheep shall be eligible which has not been clipt bare on or after the 1st April of the year of the Show. (This rule does not apply to Lambs.)

**Colouring, &c., of Sheep and Pigs.** 44. The Steward of Sheep, who can call in assistance if so desired by him, shall have full power to disqualify any pen of Sheep which he considers coloured, or when the fleece, face, or legs have been dealt with by the use of substances other than ordinary dips free of added colouring matter.

The use of artificial whitening or powder on Large White Pigs is prohibited, and the Judge is empowered to disqualify any pig so whitened or powdered.

**Flock Books.** 45. All Oxford Down and Suffolk Sheep shown must be entered or eligible for entry in the Oxford Down and Suffolk Flock Books respectively.

**Poultry.** 46. In Poultry the Aged Birds must have been hatched previous to, and Cockerels and Pullets in, the year of the Show.

**Railway Passes.** 47. Railway Certificates for Stock, for both outward and return journeys, will be issued to Exhibitors before the Show along with their Tickets of Admission (see page 96).

**Admission of Stock.** 48. Stock and Poultry will be admitted on Monday, the day before the opening of the Show, and, with the exception of Horses, must be in the Yard before 12 o'clock that night. Horses must be in before 8 o'clock on the morning of Tuesday, except those entered in classes for which other times for arrival are elsewhere stated in this Premium List. Judging begins at 9.30 A.M. on Tuesday. Stock and Poultry will be exhibited on Tuesday, Wednesday, Thursday, and Friday. Any animals selected by the Stewards may be required to take part in the Stock Judging Competition on the Thursday. Stock may be admitted on the Saturday preceding the Show, but only by sending two days' prior notice to the Secretary's Office in the Showyard.

**Parades.** 49. Horses and Cattle must be paraded at the times stated in the Programme of the Show, and when required by the Stewards, and under their direction. Females of the Highland Cattle breed born in or after 1927 must be paraded; those born before 1927 will be paraded at the option of the Exhibitor. In Parade, Horses must be ridden or led as provided in their respective classes. Prize and commended Cattle and Horses will receive two rosettes each, which must be attached to the head of the animal, one on each side. Attendants must be beside their animals *forty-five minutes before the hour of Parade*, and be ready to proceed to the ring immediately on receiving the order of the Stewards. Infringement of this Rule, or failure of any attendant to obey the orders of the Society's officials, will render the Exhibitor liable to a fine of 20s. for each separate infringement or act of disobedience, and to the forfeiture of any or all of the Prizes awarded to him at this Show.

50. Exhibitors shall be answerable for all acts, whether committed by themselves, their servants, or others in charge of their Stock, and shall be responsible for the condition of their animals during the whole time they remain in the Showyard. *Responsibility of Exhibitors.*
51. No animal shall be taken out of its stall after 10 A.M. during the Show except by order of the Stewards, or with permission of the Secretary. *Moving from Stalls.*
52. Cattle shall not be taken out of their stalls to be washed after the Judging has commenced. Cattle must not be washed beside the Judging Rings. Those infringing this Rule shall be liable to a fine of 10s. *Washing Cattle.*
53. Soap or other adhesive material must not be used in dressing cattle or horses. The use of blacking or other colouring matter on cattle is prohibited. Infringement of this Rule will render the animal upon which the material is used liable to be disqualified. *Soaping prohibited. Colouring matter.*
54. Loose-boxes will be provided for all horses; covered accommodation for other live stock. Stalls for nurse cows charged at ordinary rates. Boxes (floored) for attendants on Cattle, Horses, Sheep, Goats, and Pigs will be provided at a charge of 40s. for each box for members; 50s. for non-members. (See Rule 79.) *Loose-boxes and Stalls.*
55. Exhibitors requiring the boxes, stalls, or pens for their animals to be floored must give instructions, stating the Catalogue No., to the Society's Showyard Erector, Mr John Reid, Showyard, ten days before the Show opens. (For charges, see Rule 78.) *Floored Boxes and Stalls for Animals.*
56. Bulls must be secured by nose-rings, with chains or ropes attached, or with strong halters and double ropes. All Cattle, other than Highland Cattle, must be tied in their stalls. *Securing Cattle.*
57. During the time the Show is open to the public no rug shall be hung up so as to conceal any animal in a horse-box or stall, except with the special permission of the Steward of that department. *Concealing Animals.*
58. Five days' supply of straw, hay, grass, and tares will be provided free by the Society. Any additional fodder or other kinds of food required will be supplied at fixed prices in the Forage-yard. The Forage-yard will close at 1.30 P.M. on Friday, the last supply to be given to attendants then; and if any extra supply is required on account of stock remaining in the Yard after the close of the Show, notice must be given to the Forage Steward not later than 5 o'clock on Thursday. Any servant removing bedding from an adjoining stall will be fined in double the amount taken. Exhibitors may fetch their own cake or corn to the Yard, but not grass, tares, hay, or straw. Coops, food, and attendance for Poultry will be provided by the Society. *Fodder.*
59. Servants in charge of Stock must bring their own buckets or pails and a piece of rope or sheep-net to carry their forage. Mangers, and sheep and pig troughs, will be provided. *Feeding appliances.*
60. Sawdust must not be used as bedding for Stock. *Sawdust.*
61. As the command of water in the Yard is limited, it is particularly requested that waste be avoided. *Water.*
62. No lights allowed in the Yard at night, and Smoking is strictly prohibited within the Sheds. Those infringing this Rule shall be liable to a fine of 10s. The gates will be closed at midnight, and no person shall be allowed to enter or leave the Yard between that time and 5 A.M. without a special permit. *Lights and Smoking. Closing of Gate.*
63. Stock or Poultry cannot be removed from the Yard till 5 P.M. on Friday, the last day of the Show, except on certificate by the Veterinary Surgeon employed by the Directors, countersigned by the Steward of the department or the Secretary. *Removal of Stock.*



*With-  
drawal of  
Horses  
overnight.*

64. At the close of the Show on Tuesday, Wednesday, and Thursday, horses may be withdrawn for the night on a deposit of £5 for each animal, which shall be forfeited, along with any prize money it may have gained, if the animal is not brought back. They must return between 7 and 7.30 the following morning, and those not in before 8 shall forfeit 10s. Horse passes to be applied for at the Secretary's Office between 5 and 6 P.M. on Tuesday, and the deposit, unless forfeited in whole or in part, will be returned between 12.30 and 2.30 on Friday.

*Order in  
removal.*

65. When the Stock is leaving the Yard, no animal is to be moved till ordered by those in charge of clearing the Yard. Those transgressing this Rule shall be liable to a fine of 10s., and to be detained till all the other Stock is removed.

*Penning  
and  
removing  
Poultry.*

66. Poultry may be penned before the opening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor an authorised representative of the Exhibitor being present to pen or remove Poultry, the birds will be penned and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to Exhibits by errors or accidents in penning, despatching, or conveying Exhibits.

*Closing of  
Poultry  
Shed to  
Public.*

67. On the opening day of the Show the Poultry Shed will be closed to the public during the Judging. On the last day of the Show the Poultry Shed will be closed to the public at 4 P.M.; at 5 P.M. Exhibitors or their representatives will be admitted to the Shed to remove Exhibits, provided the Exhibitor has, *not later than 11 A.M. on the last day of the Show*, given written notice to the Secretary to the effect that the Exhibitor or the Exhibitor's representative will attend at the Poultry Shed at 5 P.M. to remove the birds.

### JUDGING STOCK AND POULTRY.

*Opening  
Gates.*

68. On Tuesday, the first day of the Show, no person will be admitted, except Servants in charge of Stock, till 8 A.M., when the Gates are opened to the public.

*Judging.*

69. The Judges will commence their inspection at 9.30 A.M. The spaces reserved for the Judging will be enclosed, and no encroachment thereon shall be permitted.

*Ineffi-  
cient merit.*

70. In no case shall a Premium be awarded unless the Judges deem the animals to have sufficient merit; and where only one or two lots are presented in a class, and the Judges consider them unworthy of the Premiums offered, it shall be in their power to award a lower prize.

*Commenda-  
tions.*

71. In addition to the Premiums, the Judges may award **one** Very Highly Commended, **one** Highly Commended, and as many Commended tickets in each class as they consider justified by the number and merit of the entries.

*Ayrshire  
and British  
Friesian  
Cows and  
Heifers.*

72. Ayrshire and British Friesian Cows which have not calved before the Show, whether entered in a class for Cows in Milk or for Cows in Calf, shall be judged along with the Cows in Calf, and Ayrshire and British Friesian Cows or Heifers which have calved before the Show—in whichever of the classes entered—shall be judged along with Cows in Milk. Heifers entered in a Milk Class,

which have not calved before the Show, will be judged along with Heifers in Calf.

73. Attending Members will accompany the Judge of each section. It will be the duty of Attending Members to bring the animals out to the Judges and to see that no obstruction is offered to them, and that the space reserved for them is not encroached upon; to ticket the prize animals; to send the Nos. of the prize animals to the Award Lectern near the Secretary's Office; to assist the Judges in completing their return of awards; and should any difficulty arise, to communicate with the Stewards or Secretary. *Attending Members' duties.*

74. It shall not be competent for any Exhibitor, nor for his Factor or Land-Steward, to act as a Judge or Attending Member in any class in which he is competing.

### DAIRY PRODUCE.

75. Dairy Produce will be received in the Showyard on Monday, the day before the opening of the Show, and till 8 A.M. on Tuesday, the first day of the Show. Judged at 9.30 A.M. on Tuesday. Exhibited Tuesday, Wednesday, Thursday, and Friday.

76. Dairy Produce must have been made on the Exhibitor's farm in the year of the Show. No Exhibitor shall show more than **one** lot in each class. Exhibits of Dairy Produce may be placed before the opening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor a person with written authority from the Exhibitor being present to place or remove exhibits, they will be placed and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. In the case of exhibits which are not removed by 5.30 P.M. on the closing day of the Show, the Society will hold itself at liberty to hand them over to the railway companies for despatch to the respective Exhibitors. *Placing and removing Dairy Produce.*

### STALL RENT.

77. The Stall Rents (which include Entry Fees), as stated opposite the individual classes in this List, shall be paid by Exhibitors when making their entries. The Secretary is instructed to return entries sent without the necessary fees. *Stall Rent.*

### FLOORED BOXES AND STALLS.

78. Exhibitors desiring the boxes, stalls, or pens for their animals to be floored can have this done by giving instructions, stating the Catalogue No., ten days before the opening of the Show, to the Society's Showyard Erector (Mr John Reid, Showyard, Alloa Park, Alloa), to whom the following charges for flooring have to be paid: Horses, 30s. each; Ponies, Cattle, Sheep, Goats, and Pigs, 20s. each. *Floored Stalls for Animals.*

## ACCOMMODATION FOR ATTENDANTS.

*Accommodation for Attendants.*

79. Boxes for accommodation of attendants on Stock will, if desired, be provided beside the Stock at a charge of 40s. per box for members and 50s. for non-members. Attendants' boxes will be floored and lined with wood, with door. Applications for attendants' boxes must accompany entries of Stock, and in the case of all Horses, Exhibitors must state, at the time of entry, the animal next to which the attendant's box is to be placed. Attendants' boxes in the Cattle, Sheep, Goat, and Pig Sections will be erected at the end of each run of shedding. Attendants' boxes cannot be guaranteed after the closing date.

## IMPLEMENTS AND OTHER ARTICLES.

*Admission of Goods.*

80. Implements will be received in the Yard from Tuesday, 8th June, till 5 o'clock on the afternoon of Monday, 21st June. Exhibited Tuesday, Wednesday, Thursday, and Friday. The Schedule of Entry must be filled up so far as within the knowledge of the Exhibitor, and prices must be stated.

*Premiums.*

81. No Money Prizes or Medals, except when specially offered, will be given by the Society for Implements of any kind.

*Refusing Entries.*

82. Agricultural Implements, and Implements and collections of articles not Agricultural, will be received for Exhibition, but the Secretary is entitled to refuse entries from dealers in articles not deemed worthy of Exhibition.

*Local Operatives.*

83. In order to encourage exhibits of Agricultural Implements from operative Blacksmiths and Carpenters in the district of the Show, open space will be provided for these in some less prominent part of the Yard at a charge of £1 for space 10 feet wide and 20 feet deep.

*Articles not entered.*

84. Every article to be exhibited must be entered on the Society's Entry Form. Any article not so entered that is taken to the Show is liable to be ordered out of, or removed from, the Showyard, or confiscated to the Society. Exhibitors infringing this Rule are moreover liable to a fine of £1.

*Selling by auction and noisy behaviour forbidden.*

85. "Cheap-Jacks" are not admitted to the Showyard. The selling of goods by auction, shouting, and other behaviour calculated to annoy visitors or Exhibitors, are strictly forbidden. The use of mechanical loud-speaking appliances is also prohibited. Exhibitors infringing this Regulation are liable to a fine of £1, and to have themselves and their goods ordered out of, or removed from, the Showyard, or to have their goods confiscated to the Society.

*Placing Exhibits.*

86. The articles of each Exhibitor must all be placed in one Stand, except Implements in motion, and must not on any account extend beyond the allotted space. No article shall be moved out of its Stand, or the Stand dismantled, till the termination of the Show, at 5 P.M. on Friday.

*Restoring Turf.*

87. When the ground requires to be broken, the turf must be carefully lifted and laid aside, and the surface must be restored to the satisfaction of the Society, and at the expense of the Exhibitor. Failing this being done, the Society shall be at liberty to restore the ground and charge the cost to the Exhibitor.

*Arranging Exhibits.*

88. Exhibitors must arrange their own articles *within* the space allotted to them before 9 o'clock on Tuesday, the first day of the Show, and to the satisfaction of the Stewards in charge of the Implement Yard. Exhibitors are prohibited from sub-letting space

allotted to them, and from displaying the name of any other firm on their Stand. All signs, except signs on gables, must face the front only. Nails must not be driven into the canvas. *Signs.*

89. Exhibitors are not allowed to distribute handbills anywhere in the Yard except at their own Stand; and they must not for this or any other purpose encroach upon the adjacent alleys or open spaces. *Handbills.*

90. Exhibitors are required to have their Stands and the portions of the alleys immediately adjoining them swept up before eight o'clock on each morning of the Show. *Sweeping Stands, &c.*

91. All Machines requiring steam or fire must be entered as such in the Certificate, and will be placed in the Motion Yard. *Fuel.* *Coke only shall be used in all cases where fire is required.* Coal shall not be used at any time in the Showyard. Those infringing this Rule shall incur a penalty of £5.

92. No Steam Engine shall be driven in the Yard at a greater speed than 4 miles an hour. Traction Engines shall not be used in conveying Exhibits or other goods into or out of the Showyard or from one place to another therein. *Steam Engines.*

93. Locomotive and Traction Engines and other Machines must not be moved from their places without permission of the Secretary or Stewards, and must not leave their Stands till 6 p.m. on Friday. *Traction Engines.*

94. There must be attached to each Implement, when forwarded to the Show, a label bearing the Exhibitor's name, and that of the Implement, as well as the number of the Exhibitor's Stand. *Consigning Implements.*

95. The carriage of all Implements must be prepaid.

96. Photographing in the Showyard is not permitted, except by photographers having a Stand in the Showyard or holding a "Photographer's Ticket." The "Photographer's Ticket" may be had from the Secretary, price 20s. It admits the holder to the Show when open to the public, and entitles him to photograph in the Showyard, subject to arrangements made by the Stewards. It does not entitle the holder to sell photographs in the Showyard. No photographer shall be allowed in the ring during Parades, except with the sanction of the Steward of Parades. *Photographing in Showyard.*

97. Covered Booths for Offices (9 feet by 9 feet), purely for business, not for exhibition of goods, can be had for £5 to Members and £7 to Non-Members. *Offices.*

98. Each Exhibitor in the Implement Department who is not a Member of the Society will receive one free Ticket of Admission to the Showyard for himself or a member of his firm. All Exhibitors will receive, for the use of attendants employed by him at his Stand, two Tickets of Admission for each complete ten feet of shedding in the Motion Yard, and one Ticket for each complete ten feet of shedding in the other sections. No additional Free Tickets can be issued in any circumstances whatever. Additional Attendants' Tickets, not more than three for each ten feet of frontage, and in no case exceeding a maximum of twenty for one Exhibitor, may be obtained by application in writing by the Exhibitor at 5s. each. *Exhibitors' and Attendants' Tickets.* *No tickets will be issued without an Order.*

99. The Tickets of Admission for Exhibitors and Attendants referred to in the foregoing Regulations will (about fourteen days prior to the Show) be issued to the Exhibitors in blank, with the number of the Exhibitor's Stand. The name of the person for whom each Ticket is intended must be written on it before it is used. Each person holding a Free Ticket of Admission must sign his or her name on the back thereof, and must also, when required, sign his or her name in the book at the Entrance Gate. Exhibitor's attendants are *Tickets to be filled up and signed.*

*Tickets not Transferable. Improper use of Tickets.*

*Admission of Supplies for Stand-holders.*

strictly cautioned not to lend or transfer their Tickets, which can be used only by the persons whose names they bear, and who must be *bona fide* acting for, or employed by, the Exhibitor. No ticket is transferable. An Exhibitor is liable to a fine of £1 for each case of transfer or other improper use of a Ticket issued to himself or employee.

100. The following are the arrangements for the admission of Supplies (Refreshments or other goods) for Stand-holders during the Show : Messenger on foot (with or without hand-barrow), with supplies, admitted by Special Ticket ; price for one admission, 2s., for six admissions, 10s. Motor or horse vehicle and driver, with supplies, admitted by Special Ticket ; price for one admission, 2s. 6d., for six admissions, 12s. These Special Tickets may be had from the Secretary. Vehicles, with supplies, will be admitted to the Showyard only between *Seven o'clock and Nine o'clock*, on each morning of the Show, except by written permit from the Secretary.

Vehicles, with a carrying capacity of more than 2 tons, will not be admitted to the Showyard at any time, except by special permit from the Secretary. This rule will be strictly enforced.

101. Motor Lorries, Vans, or other vehicles belonging to Stand-holders, will not be allowed to remain in the Showyard during the period of the Show. Vehicles conveying exhibits to Stands prior to the Show must follow the routes indicated by the Society's officials, and must leave the Showyard immediately on completing delivery. Motor Cars conveying passengers will not be permitted to enter the Showyard.

*Cycles.*

102. The riding of Cycles in the Showyard is prohibited.

*Accidents.*

103. The Society will not be responsible for any accident that may occur from the machinery belonging to any Exhibitor ; and it is a condition of entry that each Exhibitor shall hold the Society harmless, and indemnify it against any legal proceedings arising from any accident caused by his machinery.

*Alcoholic Drinks.*

104. The giving of Alcoholic Drinks to visitors at Stands in the Show is strictly prohibited. With a view to the enforcement of this rule the Society reserves the right of unrestricted access, by its authorised representatives, to all Exhibitors' Stands during the Show.

*Gas and Electric Power.*

105. Exhibitors desiring the use of gas in the Showyard should apply to the Manager, Gas Works, Alloa, and those desiring electric power should apply to Messrs Pratt Bros. (Edinburgh), Ltd., 3 West Park Place, Dalry Road, Edinburgh, in both cases not later than 15th May.

*Space for Stands.*

106. \* Round to be taken in spaces of 10 feet frontage. Exhibitors must take their space in one or other of the Sections listed under Rule 110. Space is not let partly covered and partly open. Exhibits not in motion may be excluded from the Motion Yard. The space in the Motion Yard being limited in extent, and intended mainly for exhibits in motion, not more than one-fifth of the space allotted to any one Exhibitor—and in no case more than 600 square feet—may be occupied in the Motion Yard by exhibits not in motion.

*Maximum Space.*

107. The maximum extent of space which any one Exhibitor may apply for shall be 60 feet of frontage in the Motion Yard, and 120 feet of frontage in the other Sections.

*Allocation of space.*

108. The Society reserves the right to allot to applicants for Stands either the whole or part of the space they ask for.

\* Special provision may be made for Exhibitors of both machinery in motion and implements and machinery not in motion on application being made to the Secretary.

109. Exhibitors requiring work executed in connection with the fitting up of Stands allotted to them must employ the Society's Show-yard Erector—Mr John Reid, 55 Blenheim Place, Aberdeen. The execution of orders received later than one week before the opening of the Show cannot be guaranteed. *Fitting up of Stands.*

110. Rates for space, payable by Exhibitors when making their Entries :—

	Members.	Non-Members.
1. Open ground without Shedding, 20 ft. deep, per 10 ft. frontage	£2 0 0	£2 15 0
2. Open space without Shedding, 40 feet deep, per 10 feet frontage	4 0 0	5 10 0
3. Shedding, 20 ft. deep, 7 ft. to eave, per 10 ft. frontage	3 0 0	3 15 0
4. Shedding, 20 ft. deep, 7 ft. to eave, close boarded at back, per 10 ft. frontage	5 0 0	6 0 0
5. Main Square, without Shedding, for erection of Exhibitor's own Pavilion (construction of which must be approved by Society), 50 ft. deep, per 10 ft. frontage	6 0 0	7 10 0
6. †Motion Yard, without Shedding, 50 ft. deep, per 10 ft. frontage	4 10 0	6 0 0
7. †Motion Yard, with Shedding (10 ft. open behind, 20 ft. covered, and 20 ft. open in front), 11 ft. to eave, per 10 ft. frontage	6 0 0	7 10 0
8. Special Section for Motor Vehicles, 30 ft. deep (20 ft. covered and 10 ft. open in front), 11 ft. to eave, per 10 ft. frontage	5 0 0	6 0 0
9. Covered Booths for offices, 9 ft. by 9 ft., each	5 0 0	7 0 0
10. Press offices, 9 ft. by 9 ft., each	£4.	

† See Rules 106 and 107.

Tents and marquees not allowed in the Showyard. All internal fittings to be executed by the Exhibitor at his own expense. The Society's Showyard Erector must be employed. See Rule 108.

## FLOWER SHOW.

See also Regulations 80 to 109.

1. Exhibits in this section may comprise collections of flowers, fruits, plants, or shrubs, formal gardens, and rock gardens.

2. Application for space, for which no stand rent or entry fee is payable, must be made on special entry forms, to be obtained from the Secretary and lodged on or before 24th April. Entry forms must give full details of each exhibit and the amount of space required. Space, which may be either covered or open, will be allocated in sections of 10 feet each, with a depth of 20 feet, and a maximum of 60 feet frontage for any one exhibitor. For space without shedding special consideration will be given to applications from exhibitors desiring a greater depth than 20 feet. Staging will be provided free of charge.

3. The Society reserves the right to refuse any application for space, or to limit the amount of space to be allocated to any exhibitor.

4. Each exhibitor shall receive one exhibitor's ticket and, in addition, two attendants' tickets for each 10 feet of frontage. Additional attendants' tickets, not more than three for each 10 feet of frontage, and in no case exceeding a maximum of twenty, may be purchased at a price of 5s. each. *No tickets will be issued without an order.*

5. All exhibits must be in position not later than 5 P.M. on Monday, 21st June, with the exception of cut flowers, which may be staged up till 8 A.M. on Tuesday, 22nd June. Stands must remain open until the Show closes on each of the four days.

## NEW IMPLEMENTS.

1. Entries of New Implements for the Society's Silver Medal must be made on or before 5th April. Entries shall be made on a special form obtainable from the Secretary, and must define clearly the exact nature of the novelty which qualifies such implement to be entered for a Medal. Unless the "New Implement" be properly described in the specification, and particulars of its novelty are given at the time of making the entry, it will not be accepted.

2. For each entry of a "New Implement," a non-returnable Entry Fee of £1 will be charged.

3. In cases of sufficient merit, the Judges will recommend the award of the Society's Silver Medal to New Implements for agricultural or estate purposes, or to new improvements in such implements.

4. The Society does not bind itself to try in the field every "New Implement" entered for a Silver Medal, but in general a practical trial will be required before an award is made. The Judges shall report to the Directors those cases in which they consider a practical trial necessary.

5. Where intimation is received by the Secretary, not later than the 26th April, that a "New Implement" is ready for trial, the Directors may arrange for a practical trial before the Show at a place and date to be decided upon. In other cases the practical trial of New Implements will take place after the Show.

6. Any Exhibitor who expresses a wish to do so can, with the sanction of the Steward of Implements, at his own expense take his New Implement out of the Showyard during the Show week and put it to work, and, if within a reasonable distance, the Judges will, if they deem it necessary, inspect it at work and decide if it is worthy of a Silver Medal.

7. No Silver Medals will be awarded to, nor can any entry as New Implements be accepted of, machines of any class for which competitive trials have been announced by the Society as about to take place.

8. The Judges of New Implements will commence their inspection at 2.30 P.M. on Monday, 21st June, and will take in rotation the stands of the Exhibitors who have entered New Implements for the Society's Silver Medals. Each Exhibitor, or his representative, will be expected to be at the stand to explain the working of the Implement to the Judges. If the exhibit be not ready and in working order by the time the Judges make their inspection, it is liable to be struck off the list.

9. All publications by Exhibitors of the award of the Society's Silver Medals must state the year of the award, and must specify the exact nature of the "New Implement," of the improvement, or of the attachment to an Implement, for which the Silver Medal has been awarded.

10. On the recommendation of the Judges, with the approval of the Directors, any New Implement of merit, which cannot be sufficiently tried, or which is capable of further development, may be entered and exhibited as a "New Implement" at the succeeding Show of the Society.

11. The Judges' decision, when duly accepted and recorded, will in all cases be final.

## RESERVED SEATS (NUMBERED) IN GRAND STAND.

*For Charges and Tickets, apply to Secretary up to opening day of Show. Thereafter tickets are sold only in the Showyard at the Booking-offices behind the Grand Stand.*

## ADMISSION OF THE PUBLIC.

The public will be admitted daily at 8 A.M. Judging begins on Tuesday at 9.30 A.M. The charges for admission to the Yard will be—Tuesday, from 8 A.M. till 5 P.M., 5s. Wednesday, from 8 A.M. till 5 P.M., 5s. ; from 5 P.M. to 8 P.M., 2s. Thursday, from 8 A.M. till 5 P.M., 2s. 6d. ; from 5 P.M. till 8 P.M., 1s. Friday, from 8 A.M. till 5 P.M., 1s.

On Thursday and Friday children under twelve years of age admitted at 6d.

No Pass-out Checks given, and no re-admission without payment.

Season Tickets—12s. 6d. each (children under 12 years of age, 5s. each)—on application to Secretary. On the days of the Show, Season Tickets are sold only at the Entrance Gates.

## ADMISSION OF MEMBERS AND EXHIBITORS.

On exhibiting their "*Member's Badge*," which is strictly not transferable, Members of the Society are admitted free to the Showyard. Badges will be sent to all Members residing in Great Britain, Northern Ireland, and Irish Free State, whose addresses are known, and on no account will duplicates be issued. All Members not producing their badges must pay at the gates, and the admission money will not on any account be returned. Badges must be signed by Members before being presented at the gate, and Members should continue to wear the badge during the whole time that they are in the Showyard.

Tickets of admission to the Showyard are sent to Exhibitors of Stock, Poultry, Dairy Produce, &c. (not Members), whose Entry Fees amount to not less than 12s. 6d.

For Exhibitors of Implements and their assistants tickets are issued as provided in the Regulations for Implements.

## VARIOUS.

Exhibitors may display their own Placards *inside and in front of* their stands ; with this exception, no Bills of any kind other than those of the Society are permitted on any of the Show erections. No newspapers or any other articles to be carried about the Yard for sale or display.

*No Carriages or Equestrians admitted without special leave from the Directors, and then only for Invalids. Bath-chairs may be brought in.*

Premium Lists, Regulations, and Certificates of Entry may be obtained by applying at the Secretary's Office, No. 8 Eglinton Crescent, Edinburgh 12.

*All Communications should be addressed to the Secretary of the Highland and Agricultural Society of Scotland, No. 8 Eglinton Crescent, Edinburgh 12. From 15th to 24th June, to the Secretary's Office, Showyard, Alloa Park, Alloa.*

*Address for Telegrams—"SOCIETY," EDINBURGH.*

*Telephone No.—EDINBURGH, 23655.*



### RAILWAY ARRANGEMENTS.

The Railway Companies will be furnished with a list of the Exhibitors of Stock and Implements, after the 1st June. All applications for horse-boxes and trucks, and for information as to train arrangements, must be made by the Exhibitors themselves to the Stationmaster where their stock is to be trucked.

*The arrangements made by the Railway Companies for the conveyance of Live Stock and Goods to and from the Show are indicated below, but Exhibitors are recommended to apply to the respective Companies for full particulars :—*

1. Live Stock, Agricultural Machines, Implements, and other exhibits to the Show to be charged ordinary rates.

2. Live Stock, Agricultural Machines, Implements, and other exhibits from the Show, if sold, to be charged ordinary rates.

3. Live Stock from the Show, if unsold, and returned not later than the second day after the closing day of the Show (excluding Sunday), to be carried at half rates back to the Station whence the animals were sent, at owner's risk, on surrender of a Certificate from the Exhibitor, provided in accordance with the Railway Companies' requirements, and signed by the Secretary, to the effect that they are really unsold; failing surrender of such Certificate, ordinary rates will be charged. The reduction to half rates is to be allowed only when the Stock are consigned to be returned by the same route as that by which they were conveyed to the Show, but it shall be in the option of the Railway Company or Companies to return the Stock at half rates by a different route. Minimum charge for Stock returning at half rates to be one-half the ordinary minimum.

4. Live Poultry from the Show, *if unsold*, to be carried by Passenger Train at half rates back to the Station from which sent, at O.R., on surrender of an agreed Certificate signed by the Secretary of the Show to the effect that the Poultry are unsold and remain the property of the Exhibitor. No Certificate will be required for such traffic, which is intended by the owner to be returned from the Show to the original sending Stations by the same route as originally forwarded and the charges prepaid for both the outward and return journeys. (Poultry to be charged ordinary rates both ways when conveyed by Goods Train.)

Poultry are only charged at the half rate when returned by Passenger Train not later than the second day after the closing of the Show (Sunday being treated as a *dies non*).

5. Horse-boxes, or other Passenger Train vehicle, will not be provided for the carriage of Live Stock sent by Goods Train and invoiced at Goods Train rates. *For rates for Horse-boxes by Passenger and Special Trains, apply to the Railway Companies.*

6. Provender conveyed to and from Agricultural Shows in the same vehicle as Live Stock will be charged at the applicable rates, subject to a free weight allowance, viz.—

Cattle	.	.	.	.	.	.	per animal, 112 lb.
Horses	.	.	.	.	.	.	112 "
Sheep, goats, lambs, pigs, and calves	.	.	.	.	.	.	56 "

7. The carriage of all Live Stock, Implements, and other articles going to the Show for exhibition must be PREPAID; and the carriage on all traffic returned from the Show by Passenger Train Service must be PREPAID.

The carriage charges on Live Stock conveyed in special vehicles by Passenger Train and intended to be returned to the original

sending Station may also be prepaid for the return journey at the original sending Station if the owner so desires.

The Railway Charge on all exhibits which are conveyed by Passenger Train in the Guard's Van and intended to be returned from the Show direct to the original sending Station by the same route must be PREPAID, for both the outward and return journeys, at the original sending Station. The agreed form of address label for Poultry, Dairy Produce, Bee Appliances and Honey, and Rural Industries exhibits, which will be supplied through the Secretary of the Society, must be used in such cases.

8. Attendants in charge of Live Stock are conveyed free in the cases shown below, when certified by the owners to be *bona fide* in charge of such Live Stock :—

*In Horse-Boxes.*—Horses and Cattle : One man for each consignment, except where the consignment requires more than one vehicle, when one man to each vehicle may be sent free ; but where two or three Horses or Cattle forming one consignment are sent in the same Horse-box and a man is required to travel with each animal, a man for each animal may be conveyed free, provided each animal is charged for separately.

*In Horse-Boxes.*—Small animals : One man to each vehicle.

*In specially constructed Cattle Trucks.*—Cattle or other animals : One man to each vehicle.

9. Agricultural Machines, Implements and other Exhibits from the Show, if *unsold*, to be conveyed at half rates back to the Station whence they were sent, at Owner's risk, on production of a Certificate from the Exhibitor (provided and signed by the Show Secretary) to the effect that they are unsold ; failing production of such Certificate, ordinary rates must be charged. The reduction to half rates is to be allowed only when the articles are returned by the same route as that by which they were conveyed to the Show, but it shall be in the option of the Railway Company or Companies to return the articles at half rates by a different route. This applies only to Goods Train Traffic.

10. Unsold articles, previously carried by railway, transferred from one Show to another, or exhibited at several Shows consecutively, and returned to the Station from whence originally sent, will be conveyed at half rates at Owner's risk, on production of a Certificate from the Exhibitor (provided and signed by the Show Secretary) to the effect that they are unsold ; failing production of such Certificate, ordinary rates will be charged. This applies only to Goods Train Traffic.

11. Unsold Live Stock transferred from one Show to another will be charged ordinary rates.

12. The ordinary rates charged for carriage do not in any case include delivery *to*, or collection *from*, the Showground.

13. Agricultural Societies' Show Plant must be charged at Class 10 rates, Station to Station.

14. Tents, Canvas, Show Stands, and other articles not for exhibition—

(a) When the property of Exhibitors, to be charged half the ordinary rate at Owner's risk from Show to Show, and on return from the Show to the Station from whence originally despatched.

(b) When not the property of Exhibitors, to be charged the ordinary rates both going to and returning from Show.

15. Carriages and other Road Vehicles are only conveyed by Passenger Train when this can be conveniently done.

## DELIVERY AND COLLECTION CHARGES.

**Cartage Charges to be paid by the Exhibitor for the Delivery or Collection of traffic between the Railway Station at Alloa and the Showground of the Highland and Agricultural Society's Show at Alloa, on 22nd, 23rd, 24th, and 25th June.**

*General traffic . . . . .	5s. 6d. per ton.
*Machinery and Implements . . . . .	5s. 6d. per ton.
* Minimum charge per consignment as for 5 cwt., unless the charge on actual weight at the Small Parcels Scale by Goods Train at the rate of 5s. 6d. per ton is lower.	
Machines (hauled on their own wheels), and Hay Rakes, Cultivators, Dis- tributors, Drills, Hay Makers, Horse Hay Rakes, Swath Turners, Trussers and other similar bulky articles, not exceeding one ton . . . . .	5s. 6d. per ton.
Minimum charge . . . . .	2s. 9d.
Single articles, exceeding 1 ton but not exceeding 3 tons . . . . .	8s. per ton.
Single articles, exceeding 3 tons but not exceeding 5 tons . . . . .	9s. 6d. per ton.
Single articles, exceeding 5 tons, by special arrangement only, but no less charge than . . . . .	11s. 9d. per ton.
Railway containers (net weight of contents) . . . . .	8s. per ton.
Minimum charge . . . . .	8s.
Loaded vans on their own wheels ex- ceeding 1 ton but not exceeding 3 Loaded vans on their own wheels ex- ceeding 3 tons but not exceeding 5 Loaded vans on their own wheels ex- ceeding 5 tons, by special arrange- ment only, but no less charge than . . . . .	8s. per ton. 9s. 6d. per ton. 11s. 9d. per ton.
Rustic Houses, by special arrangement only, but no less charge than . . . . .	14s. per load.
Carriages, on their own wheels . . . . .	6s. each.
Carriages, if carried on a Railway Com- pany's lorry . . . . .	7s. 6d. per ton.
Minimum charge per consignment . . . . .	7s. 6d.
Cattle, in floats . . . . .	5s. per head.
Minimum charge for each float . . . . .	7s. 6d.
Sheep, Goats, and Pigs, in floats . . . . .	1s. 6d. per head.
Minimum charge for each float . . . . .	7s. 6d.
Pigs, in crates . . . . .	3s. 3d. per crate.
Minimum charge per load . . . . .	6s. 6d.
Ordinary Parcels by passenger train . . . . .	6d. each.
Miscellaneous passenger train traffic, in- cluding packages of plants and flowers carried at O.R. rates S. to S. Minimum charge per consignment . . . . .	9d. per cwt. 1s. 6d.
† Poultry, in crates or hampers . . . . .	9d. per crate or hamper.
Cartage from point to point inside the Showground . . . . .	3s. per hour.
Minimum charge . . . . .	3s.

† Poultry exhibits only will be conveyed at the Society's expense from the Railway Station to the Showyard and back, but no exhibit subject to railway charges will be received by the Society. All other delivery charges must be paid by the Exhibitor.

## THE PRESIDENT'S CHAMPION MEDALS

A Champion Medal is given by the Earl of Mar and Kellie, K.T., President of the Society, for the best *Animal* in each of the following sections:—

- |   |   |  |
|---|---|--|
| 1. Shorthorn.<br>2. Aberdeen-Angus.<br>3. Galloway.<br>4. Belted Galloway.<br>5. Highland.<br>6. Ayrshire.<br>7. British Friesian.<br>8. Clydesdale Stallion or Colt. | 9. Clydesdale Gelding.<br>10. Clydesdale Mare or Filly.<br>11. Hunter.<br>12. Highland or Western Island Pony.<br>13. Shetland Pony.<br>14. Hackney in Harness.<br>15. Blackface Sheep. | 16. Cheviot.<br>17. Border Leicester.<br>18. Half-Bred.<br>19. Oxford Down.<br>20. Suffolk.<br>21. Goat.<br>22. Large White Pig.<br>23. Large Black. |
|---|---|--|

NOTE.—*Animals entered as Extra Stock may compete for these Medals. Former Winners of the President's Medals are eligible. The Society shall have the right to photograph the Winners for publication in the 'Transactions.' At this Show no animal can be awarded more than one of these Medals.*

ENTRY FEES		CLASS	* CATTLE (To be judged at 9.30 A.M. on Tuesday, 22nd June) <b>SHORTHORN</b> Judges: Finlay MacGillivray; John Wallace <i>President's Champion Medal for best Shorthorn Animal</i>				PREMIUMS			
Members	Non-Members						First	Second	Third	Fourth
							£	£	£	£
25/-	45/-	1	Bull born before 1st December 1934.				15	10	5	3
25/-	45/-	2	Bull born on or after 1st December 1934 and before 1st December 1935				15	10	5	3
25/-	45/-	3	Bull born on or after 1st December 1935 and before 1st April 1936				12	8	4	2
25/-	45/-	4	Bull born on or after 1st April 1936				10	6	4	2
25/-	45/-	5	Cow in Milk, born before 1st December 1933				12	8	4	2
25/-	45/-	6	Cow in Milk, born on or after 1st December 1933 and before 1st December 1934				10	5	3	2
25/-	45/-	7	Cow or Heifer born on or after 1st December 1934 and before 1st December 1935				10	5	3	2
25/-	45/-	8	Heifer born on or after 1st December 1935 and before 1st April 1936				10	5	3	2
25/-	45/-	9	Heifer born on or after 1st April 1936				10	5	3	2

\* See Rules 32 and 33.

ENTRY FEES		CLASS	CATTLE	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			<b>SHORTHORN—continued</b>	£	£	£	£
			<sup>1</sup> Edinburgh Corporation Perpetual Gold Challenge Cup for best Shorthorn animal. "Extra Stock" eligible to compete.				
			<sup>2</sup> The Duthie Perpetual Challenge Cup, value £150, for best Animal in the Shorthorn Classes, "Extra Stock" eligible to compete.				
			<sup>3</sup> Silver Cup, value £50, for the best Group of three animals in the Shorthorn Classes, consisting of one Bull and two Females, "Extra Stock" eligible to compete. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession.				
			<sup>4</sup> Tweeddale Gold Medal, value about £25, for best Shorthorn Bull, "Extra Stock" eligible to compete.				
			<sup>5</sup> The Emilio R. Casares, jun., "Junior Memorial Champion Cup," value 50 guineas, for best Shorthorn Bull in Class 4, calved on or after 1st April of the year preceding the year of the Show, that has passed the tuberculin test.				
			<sup>6</sup> Best Shorthorn Bull in the Show, entered or eligible for entry in Coates's Herd-Book—£20.				
			<sup>6</sup> Silver Medal to the Breeder of the winner of above Prize.				
			Breeder of best Bull of any age in the four Classes ("Extra Stock" not eligible to compete) —The Silver Medal.				
			<sup>6</sup> Best Shorthorn Female in the Show, entered or eligible for entry in Coates's Herd-Book—£20.				
			<sup>6</sup> Silver Medal to the Breeder of the winner of above Prize.				
			PRIZE MONEY BY SOCIETY. . . . .	£220			
			CONTRIBUTED . . . . .	40			

<sup>1</sup> This Cup was presented by the City of Edinburgh to commemorate the Society's Hundredth Show. This year the Cup is offered for best Shorthorn animal. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

<sup>2</sup> This Cup was gifted by the late Mr William Duthie, Collynie. The Cup may not be won on more than one occasion with the same animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica as a memento of his winning the Cup.

<sup>3</sup> Given by Mr William M'Nair Snadden, The Coldeoch, Blair Drummond, Stirling.

<sup>4</sup> Annual Free Income from Fund of £500.

<sup>5</sup> Given by Messrs J. Baird & Co. (Falkirk) Ltd., Bantaskin, Falkirk. This Cup will become the property of the Exhibitor who shall win it three times, not necessarily in succession.

<sup>6</sup> Given by the Shorthorn Society.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<b>CATTLE</b>						
<b>ABERDEEN-ANGUS</b>						
Judges : George Abel ; William J. Reid						
<i>President's Champion Medal for best Aberdeen-Angus Animal</i>						
25/-	45/-	10	Bull born before 1st December 1934 . . . . .	15	10	5 3
25/-	45/-	11	Bull born on or after 1st December 1934 and before 1st December 1935 . . . . .	15	10	5 3
25/-	45/-	12	Bull born on or after 1st December 1935 and before 1st March 1936 . . . . .	12	8	4 2
25/-	45/-	13	Bull born on or after 1st March 1936 . . . . .	10	6	4 2
25/-	45/-	14	Cow in Milk, born before 1st December 1933 . . . . .	12	8	4 2
25/-	45/-	15	Cow in Milk, born on or after 1st December 1933 and before 1st December 1934 . . . . .	12	8	4 2
25/-	45/-	16	Cow or Heifer born on or after 1st December 1934 and before 1st December 1935 . . . . .	10	5	3 2
25/-	45/-	17	Heifer born on or after 1st December 1935 and before 1st March 1936 . . . . .	10	5	3 2
25/-	45/-	18	Heifer born on or after 1st March 1936 . . . . .	10	5	3 2
<sup>1</sup> The "Angus" Perpetual Silver Challenge Cup, value 50 guineas, for the best Aberdeen-Angus animal, "Extra Stock" eligible to compete. <sup>2</sup> Silver Cup, value £50, for best Group of Aberdeen- Angus Cattle, consisting of one Bull and two Females, "Extra Stock" not eligible to compete. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession.						

<sup>1</sup> This Cup was presented by the Angus Agricultural Association to commemorate the holding of the Society's Annual Show at Dundee in 1933. On this occasion the Cup is offered for the best Aberdeen-Angus animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society and deliver it at the Society's Office when called upon to do so.

<sup>2</sup> Given by Mr J. E. Kerr of Harviestoun, Dollar. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

ENTRY  
FEES

Members	Non-Members
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CLASS

## CATTLE

## ABERDEEN-ANGUS—continued

## PREMIUM

First	Second	Third
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<sup>1</sup> **Silver Cup**, value 50 guineas, for best Aberdeen-Angus Bull born on or after 1st December 1934, to become the property of an Exhibitor who shall win it three times, not necessarily in succession.

**Breeder of best Bull** of any age in the four Classes ("Extra Stock" not eligible to compete)—The Silver Medal.

<sup>2</sup> **Ballindalloch Challenge Cup**, value £50, for the best Bull of any age in the four Classes.

**Exhibitor of the Winner** of the Ballindalloch Challenge Cup—The Silver Medal.

**Breeder** (if not also the Exhibitor) **of the Winner** of the Ballindalloch Challenge Cup—The Silver Medal.

<sup>3</sup> **Silver Cup**, value £50, for the best Female Animal of the Aberdeen-Angus breed, to become the property of an Exhibitor who shall win it four times, not necessarily in succession. "Extra Stock" eligible to compete.

<sup>4</sup> **Champion Gold Medal**, value £10, for best Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete.

PRIZE MONEY BY SOCIETY

£226

<sup>1</sup> Given by Senor Eduardo Estanguet, Argentina.

<sup>2</sup> "The Ballindalloch Challenge Cup," value £50, is offered for the best Bull of any age in the Aberdeen-Angus Classes. This Cup was presented by the late Sir George Macpherson Grant, Bart. The Cup will become the property of the Exhibitor who shall win it five times, not necessarily in succession. The Exhibitor and Breeder of the successful animal each year will receive the Society's Silver Medal, with suitable inscription.

<sup>3</sup> Presented by Mr Falconer L. Wallace of Candacraig, Strathdon. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

<sup>4</sup> Given by The Aberdeen-Angus Cattle Society.

ENTRY FEES		CLASS	CATTLE	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			<b>GALLOWAY</b>	£	£	£	£
			Judge: J. Faed Sproat				
			<i>President's Champion Medal for best Galloway Animal</i>				
25/-	45/-	19	Bull born before 1st December 1934 . . . . .	15	10	5	3
25/-	45/-	20	Bull born on or after 1st December 1934 and before 1st December 1935 . . . . .	15	10	5	3
25/-	45/-	21	Bull born on or after 1st December 1935 . . . . .	12	8	4	2
25/-	45/-	22	Cow in milk, born before 1st December 1934 . . . . .	12	8	4	2
25/-	45/-	23	Cow or Heifer born on or after 1st December 1934 and before 1st December 1935 . . . . .	10	5	3	2
25/-	45/-	24	Heifer born on or after 1st December 1935 . . . . .	10	5	3	2
			<sup>1</sup> Dr Gillespie Memorial Challenge Trophy, value £50, for best Galloway Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete—see conditions below.				
			<sup>2</sup> Silver Challenge Cup, value £50, for best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Challenge Trophy, "Extra Stock" eligible to compete.				
			Breeder of best Bull of any age in the three Classes ("Extra Stock" not eligible to compete) —The Silver Medal.				
			PRIZE MONEY BY SOCIETY . . . . .	£158			

<sup>1</sup> This Trophy was presented by the Galloway Cattle Society of Great Britain and Ireland for the best Galloway animal registered in the Galloway Cattle Society's Herd-Book, entered in any of the breeding classes, at the Show at which it may be competed for. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive the Galloway Cattle Society's Silver Medal as a memento of his winning the Trophy.

<sup>2</sup> This Cup was presented by the Galloway Cattle Society to commemorate the Hundredth Show of the Highland and Agricultural Society, to be awarded to best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Trophy registered in the Galloway Cattle Society's Herd-Book. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.



ENTRY FEES		CLASS		PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			<b>CATTLE</b>				
			<b>BELTED GALLOWAY</b>				
			Judge: Peter Gordon				
			<i>President's Champion Medal for best Belted Galloway Animal</i>				
25/-	45/-	25	Bull born before 1st December 1935 . . . . .	10	5	3	2
25/-	45/-	26	Bull born on or after 1st December 1935 . . . . .	10	5	3	2
25/-	45/-	27	Cow or Heifer born before 1st December 1934, in Milk or in Calf; if in calf and not in milk, to calve on or before 1st December of the year of the Show . . . . .	10	5	3	2
25/-	45/-	28	Heifer born on or after 1st December 1934 and before 1st December 1935 . . . . .	10	5	3	2
25/-	45/-	29	Heifer born on or after 1st December 1935 . . . . .	10	5	3	2
<p><sup>1</sup> Knockbrex Challenge Cup, value £50, for the best Belted Galloway Animal, "Extra Stock" eligible to compete.</p> <p><sup>2</sup> The Ian Hamilton Silver Challenge Cup, value £50, for the best Belted Galloway Animal of the sex opposite to that of the winner of the Knockbrex Challenge Cup, "Extra Stock" eligible to compete. The winning animal to be registered or eligible for registration in the Dun and Belted Galloway Herd-Book.</p> <p>Breeder of best Bull in Classes 25 and 26 ("Extra Stock" not eligible to compete)—The Silver Medal.</p>							
PRIZE MONEY BY SOCIETY . . . . .				£100			

<sup>1</sup> This Cup was presented by Mrs Brown, Kirkbrex, Glasgow, for the best Belted Galloway animal registered in the Dun and Belted Galloway Cattle Breeders' Association Herd-Book, entered in any of the breeding classes, at the Show at which it may be competed for. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Silver Medal as a memento of his winning the Trophy.

<sup>2</sup> This Cup was presented by General Sir Ian Hamilton, G.C.B. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

ENTRY FEES			CLASS	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
<b>CATTLE</b>							
<b>HIGHLAND</b>							
Judge: M. G. M'Diarmid							
<i>President's Champion Medal for best Highland Animal</i>							
25/-	45/-	30	Bull born before 1st December 1934 . . . . .	15	10	5	3
25/-	45/-	31	Bull born on or after 1st December 1934 and before 1st December 1935 . . . . .	15	10	5	3
25/-	45/-	32	Bull born on or after 1st December 1935 . . . . .	12	8	4	2
25/-	45/-	33	Cow of any age with Calf at foot . . . . .	12	8	4	2
25/-	45/-	34	Heifer born on or after 1st December 1933 and before 1st December 1934 . . . . .	10	5	3	2
25/-	45/-	35	Heifer born on or after 1st December 1934 and before 1st December 1935 . . . . .	10	5	3	2
25/-	45/-	36	Heifer born on or after 1st December 1935 . . . . .	10	5	3	2
<sup>1</sup> Perpetual Victory Challenge Cup, approximate value 50 Guineas, for the best Animal in the Male Classes, "Extra Stock" eligible to compete. Breeder of best Bull in Classes 30, 31, and 32 ("Extra Stock" not eligible to compete)—The Silver Medal. <sup>1</sup> Perpetual Victory Challenge Cup, approximate value 35 Guineas, for the best Animal in the Female Classes, "Extra Stock" eligible to compete.							
PRIZE MONEY BY SOCIETY . . . . .				£178			

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<div>CATTLE</div> <div>AYRSHIRE</div> <div>Judges: Alexander Cochrane; Hugh Howie</div> <div>1. To be eligible for competition in the Ayrshire Section Cows must have an authenticated Milk Yield, and younger Females (including Cows which have not completed their first lactation) and Bulls an authenticated Milking Pedigree, of a definite minimum amount.</div> <div>2. The minimum amount referred to shall be as follows, calculated on the basis of a period between calvings of 52 weeks, and 3·8 per cent of butter fat:—</div> <div>(a) Cows which have completed two or more lactations—700 gallons.</div> <div>(b) Cows which have completed only one lactation—600 gallons.</div> <div>(c) Younger Females and Bulls—an authenticated Milking Pedigree for dam and dam of sire on a similar basis.</div> <div>3. In the case of Cows with two or more lactations the record lodged may be that for any year the Exhibitor may select.</div> <div>4. In the case of a Cow which has no milking pedigree, and which has not completed her first lactation at date of entry, but is likely to calve again before date of Show, such Cow may be provisionally entered on her own milk yield produced within forty weeks after first calving, but when the Cow has calved again a further Certificate in terms of the Rules must be obtained and produced before the Cow is allowed to enter the judging ring. The latter Certificate is the standard of qualification, and failure to produce such will render the Cow liable to disqualification, and no entry money will be returned.</div> <div>5. The evidence of Milk Yield and Milking Pedigree shall be in the form of a Certificate signed by the Secretary of the Scottish Milk Records Association. The Certificate, besides giving the actual yields, shall give these calculated on a uniform basis of a period of 52 weeks between calvings, and 3·8 per cent butter fat. This latter figure shall be communicated to the Judge before adjudicating.</div> <div>In the case of an Exhibitor founding on the Milk Yield of any animal, or animals, made in England, said Exhibitor must forward a Certificate of Milk Yield from the Secretary of the County Milk Recording Society in which the Exhibitor resides, together with a Certificate from a competent analyst, stating that a butter-fat test had been made at least once every 28 days during the period of lactation, and with details of said butter-fat tests attached, to the Secretary of the Scottish Milk Records Association, who has undertaken to check the records and to certify same.</div> <div>6. The authenticated Milk Yields and authenticated Milking Pedigrees shall appear in the Catalogue.</div> <div>N.B.—Certificates above referred to must be obtained from Mr John Howie, 55 Alloway Street, Ayr, and lodged with Entries.</div> <div>President's Champion Medal for best Ayrshire Animal</div> <div>25/- 45/- 37 1 Cow in Milk,* born before 1934 . . . . . 12 8 4 2</div> <div>25/- 45/- 38 1 Cow in Milk,* born on or after 1st January 1934 . . . . . 10 7 3 2</div> <div>25/- 45/- 39 1 Cow of any age in Calf,* and due to calve before 1st December of the year of the Show . . . . . 10 7 3 2</div> <div>25/- 45/- 40 Heifer * born on or after 1st June 1934, in Calf and due to calve before 1st December of the year of the Show . . . . . 10 7 3 2</div> <div>25/- 45/- 41 Heifer * born in 1935 . . . . . 10 5 3 2</div> <div>25/- 45/- 42 Heifer born in 1936 . . . . . 8 5 3 2</div>						

\* See Rules 38, 42, and 72.

1 Cows in these Classes must have produced a calf within fifteen months prior to the Show.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non- Members		First	Second	Third	Fourth
CATTLE						
AYRSHIRE—continued						
25/-	45/-	43	Bull born before 1935 . . . . .			
25/-	45/-	44	Bull born in 1935 . . . . .			
25/-	45/-	45	Bull born in 1936 . . . . .			
			£	£	£	£
			12	8	4	2
			10	7	3	2
			8	5	3	2
<p><sup>1</sup>Renfrewshire Perpetual Gold Challenge Cup, value £250, for best Ayrshire Animal, "Extra Stock" eligible to compete.</p> <p><sup>2</sup>Cowhill Champion Cup, approximate value £30, for best Animal of the Ayrshire breed, entered with a number in the Herd-Book. The Cup to be won three times, not necessarily in succession, by the same person with different animals, before becoming the property of the winner. No animal which has already won the Cup shall be eligible to compete.</p> <p><sup>3</sup>Special Prize of £10 for the best Female Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1937. "Extra Stock" eligible to compete.</p> <p>Breeder of best Bull of any age in Classes 43, 44, and 45 ("Extra Stock" not eligible to compete) —The Silver Medal.</p> <p><sup>3</sup>Special Prize of £10 for the best Male Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1937. "Extra Stock" eligible to compete.</p>						
PRIZE MONEY BY SOCIETY . . . . .			£196			
CONTRIBUTED . . . . .			20			

<sup>1</sup> This Cup, along with an endowment of £500, was provided from money collected in Renfrewshire by the late Provost Muir M'Kean of Paisley, and is in commemoration of the Society's first Show in the county of Renfrew in 1913. This year the Cup is offered for the best Ayrshire Animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica in silver as a memento of his winning the Cup.

<sup>2</sup> Presented by the late Major Henry Keswick, Cowhill Tower, Dumfries, to the Ayrshire Cattle Herd-Book Society, to be competed for annually at the Shows of the Highland and Agricultural Society of Scotland. Messrs James Howie & Sons, Muirside, Dumfries, who won this Cup outright in 1934, have kindly re-presented the Cup to the Society for competition on the same conditions as formerly.

<sup>3</sup> Given by the Ayrshire Cattle Herd-Book Society.

ENTRY FEES		CLASS	CATTLE	PREMIUMS			
Members	Non-Members			First.	Second	Third	Fourth
			Judges: John Craig; Robert Wallace	£	£	£	£
			<i>President's Champion Medal for best British Friesian Animal</i>				
25/-	45/-	46	<sup>1</sup> Cow in Milk, * born in or before 1933	12	8	4	2
25/-	45/-	47	<sup>1</sup> Cow in Calf, * and not in Milk, born in or before 1933	10	5	3	2
25/-	45/-	48	<sup>1</sup> Cow in Milk, * born in 1934 or 1935	10	5	3	2
25/-	45/-	49	Heifer * born in 1935	10	5	3	2
25/-	45/-	50	Heifer born in 1936, before 1st July	10	5	3	2
25/-	45/-	51	Heifer born in 1936, on or after 1st July	10	5	3	2
25/-	45/-	52	Bull born in or before 1934	12	8	4	2
25/-	45/-	53	Bull born in 1935	10	5	3	2
25/-	45/-	54	Bull born in 1936	10	5	3	2
<sup>2</sup> The MacRobert Champion Silver Bell, value 50 Guineas, for the best Animal in the British Friesian Classes, registered in or eligible for entry in the British Friesian Cattle Society's Herd-Book. "Extra Stock" eligible to compete.							
<sup>2</sup> Silver Challenge Cup, value 50 guineas, for the best Group of three animals. The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession. "Extra Stock" eligible to compete.							
Champion Prize of £5 given by the British Friesian Cattle Society for the best Female Animal exhibited. "Extra Stock" eligible to compete.							
Breeder of Best Bull of any age in Classes 52, 53, and 54 ("Extra Stock" not eligible to compete) —The Silver Medal.							
Champion Prize of £5 given by the British Friesian Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.							
PRIZE MONEY BY SOCIETY . . . £152							
<sup>3</sup> CONTRIBUTED . . . . . 50							
PRIZE MONEY BY SOCIETY . . . £1230 0							
CONTRIBUTED . . . . . 110 0							
CUPS, MEDALS, &c. . . . . 1316 15							
<b>Total Prizes for Cattle</b> . . . . . <b>£2656 15</b>							
[See Note as to EXTRA STOCK, p. 126.]							

\* See Rules 33, 42, and 72.

<sup>1</sup> Cows in these Classes must have produced a calf within fifteen months prior to the Show.

<sup>2</sup> Presented by Lady Rachel Workman MacRobert, Douneside, Tarland. This Bell will become the property of the Exhibitor who shall win it three times, not necessarily in succession. The winner of the Bell on each occasion will receive a miniature replica in silver as a memento of winning the Bell. The Breeder of the winning animal will also receive a replica, provided he or she is not also the Exhibitor.

<sup>3</sup> Given by the British Friesian Cattle Society.

ENTRY FEES		CLASS		PREMIUM		
Members	Non-Members			First	Second	Third
				£	£	£
<p style="text-align: center;"><b>* HORSES</b></p> <p style="text-align: center;"><b>CLYDESDALE</b></p> <p style="text-align: center;"><b>STALLION AND COLT</b></p> <p style="text-align: center;">Judges: George Argo; John M<sup>c</sup>K. M<sup>c</sup>Farlane</p> <p style="text-align: center;">(To be judged at 9.30 A.M. on Tuesday, 22nd June)</p> <p style="text-align: center;"><i>President's Champion Medal for best Clydesdale Stallion or Colt</i></p>						
55/-	75/-	55	Stallion born before 1934 . . . . .	20	15	10
55/-	75/-	56	Entire Colt born in 1934 . . . . .	20	15	10
55/-	75/-	57	Entire Colt born in 1935 . . . . .	20	15	10
40/-	60/-	58	Entire Colt born in 1936 . . . . .	15	9	6
<p><sup>1</sup> Fife and Kinross Perpetual Gold Challenge Cup, value £200, for best Clydesdale Stallion or Colt. "Extra Stock" eligible to compete.</p> <p><sup>2</sup> Cawdor Challenge Cup, value 50 Guineas, for best Clydesdale Stallion or Colt, "Extra Stock" eligible to compete.</p> <p>Breeder of best Male Animal of any age in the above Classes ("Extra Stock" not eligible to compete)—The Silver Medal.</p> <p><sup>3</sup> William Taylor Memorial Prize of £10 and Certificate to the Breeder of the best Clydesdale Colt entered in Classes 57 and 58.</p>						
PRIZE MONEY BY SOCIETY . . . . .				£181		
CONTRIBUTED PRIZE . . . . .				10		

\* For prizes given by the Society, no animal is allowed to enter in more than one Class, except that horses entered in other Classes may also compete in the Jumping and Hackney in Harness Classes.

<sup>1</sup> This Cup, along with an endowment of £400, was subscribed for by the Counties of Fife and Kinross in commemoration of the Society's first Show at Cupar-Fife in 1912. This year the Cup is offered for the best Clydesdale Stallion or Colt. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica in silver as a memento of his winning the Cup.

<sup>2</sup> This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland (subject to the conditions of that Society) for the best Clydesdale Stallion or Colt registered in the Clydesdale Stud-Book, entered in any of the Clydesdale Horse Classes, at the Show at which it may be competed for. No Stallion rising five years old or upwards will be allowed to compete for this Cup unless proof be furnished to satisfy a Committee, appointed for this purpose by the Council of the Clydesdale Horse Society, that he has during the preceding season left at least 35 per cent of the mares served by him in foal. The Cup must be won four times by an Exhibitor with different animals (but not necessarily in consecutive years) before it becomes his absolute property. No animal which has won a Cawdor Cup shall be eligible to compete. The animal winning this Cup must be certified free from hereditary disease. The winner of the Cup, other than the absolute winner, shall, before delivery thereof is made to him, give security to the Clydesdale Horse Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Until the Cup be won outright, the winner on each occasion will receive the Clydesdale Horse Society's Silver Medal as a memento of his winning the Cup.

<sup>3</sup> Given by William Taylor Memorial Committee.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.**

ENTRY FEES			CLASS	HORSES	PREMIUMS			
Members	Non-Members				First	Second	Third	Fourth
					£	£	£	£
				<b>CLYDESDALE—continued</b>				
				<b>GELDING</b>				
				<b>Got by a Registered Clydesdale Stallion</b>				
				Judge : James Gray				
				(To be judged at 2.30 P.M. on Tuesday, 22nd June)				
				<i>President's Champion Medal for best Clydesdale Gelding</i>				
40/-	60/-	59		Gelding born before 1934 .	15	9	6	4
40/-	60/-	60		Gelding born in 1934 .	15	9	6	4
40/-	60/-	61		Gelding born in 1935 .	15	9	6	4
				<sup>1</sup> The Meiklem Gold Challenge Cup, value 110 guineas, for best Clydesdale Gelding, to become the property of an Exhibitor who shall win it four times with different animals, but not necessarily in succession. "Extra Stock" eligible to compete. No animal which has already won the Cup is eligible to compete.				
				PRIZE MONEY BY SOCIETY . . . £102				

<sup>1</sup> Given by Mr William Meiklem, Bennoch Park, Kirkcaldy.

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			<b>CLYDESDALE—continued</b>				
			<b>MARE AND FILLY</b>				
			Judges: Alexander Clark; James Crawford				
			(To be judged at 9.30 A.M. on Tuesday, 22nd June)				
			<i>President's Champion Medal for best Clydesdale Mare or Filly</i>				
55/-	75/-	62	Mare of any age, with Foal at foot, or due to foal before 31st July 1937 . . . . .	20	12	7	4
40/-	60/-	63	Yeld Mare born before 1934 . . . . .	15	9	6	4
40/-	60/-	64	Yeld Mare or Filly born in 1934 . . . . .	15	9	6	4
40/-	60/-	65	Filly born in 1935 . . . . .	15	9	6	4
40/-	60/-	66	Filly born in 1936 . . . . .	15	9	6	4
			<b>Cawdor Challenge Cup, value 50 Guineas, for best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.</b>				
			<b>PRIZE MONEY BY SOCIETY . . . £179</b>				
			<b>Total Prize Money for Clydesdale Horses, £472</b>				

<sup>1</sup> This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland (subject to the conditions of that Society) for the best Clydesdale Mare or Filly registered in the Clydesdale Stud-Book, entered in any of the Clydesdale Horse Classes, at the Show at which it may be competed for. The Cup must be won four times by an Exhibitor with different animals (but not necessarily in consecutive years) before it becomes his absolute property. No animal which has won a Cawdor Cup shall be eligible to compete. The animal winning this Cup must be certified free from hereditary disease. The winner of the Cup, other than the absolute winner, shall, before delivery thereof is made to him, give security to the Clydesdale Horse Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Until the Cup be won outright, the winner on each occasion will receive the Clydesdale Horse Society's Silver Medal as a memento of his winning the Cup.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.**



ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
<b>HORSES</b>					
<b>HUNTER</b>					
Judge: E. W. Hope-Johnstone					
(Classes 67 to 70 to be judged at 11 A.M. on Tuesday, 22nd June)					
<i>President's Champion Medal for best Hunter</i> (Classes 67 to 73)					
55/-	75/-	67	Hunter Brood Mare, with Foal at foot, or due to foal before 31st July 1937		
			15	7	3
40/-	60/-	68	Yeld Mare, Filly, or Gelding born in 1934— <i>in hand</i>		
			10	5	3
40/-	60/-	69	Yeld Mare, Filly, or Gelding born in 1935— <i>in hand</i>		
			10	5	3
40/-	60/-	70	Filly, Colt, or Gelding born in 1936— <i>in hand</i>		
			10	5	3
(Classes 71 to 74 to be judged at 2.30 P.M. on Tuesday, 22nd June)					
40/-	60/-	71	Mare or Gelding born before 1933, to carry 14 stone and over— <i>in saddle</i>		
			15	10	5
40/-	60/-	72	Mare or Gelding born before 1933, to carry under 14 stone— <i>in saddle</i>		
			15	10	5
40/-	60/-	73	Mare or Gelding born in 1933— <i>in saddle</i>		
			15	10	5
40/-	60/-	74	Hack of Hunter Type, born in or before 1933, not exceeding 15.2 hands— <i>in saddle</i>		
			8	5	3
<sup>1</sup> Dumfries Centenary Silver Challenge Cup, value £100, for best Hunter. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession, at Shows at which there are not less than three Saddle Classes. "Extra Stock" not eligible to compete. <sup>2</sup> Best Hunter Filly, entered in Classes 68, 69, and 70, registered with a number in the Hunter Stud-Book, or the entry tendered within one month of the award—Champion Gold Medal, value £5.					
PRIZE MONEY BY SOCIETY			£185		

<sup>1</sup> Presented by Members of the Dumfriesshire Hunt in 1930 to commemorate the centenary of the Highland Society's first Show at Dumfries in 1830.

<sup>2</sup> Given by the Hunters' Improvement and National Light Horse Breeding Society.

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			<b>RIDING PONIES</b>				
			Judge : E. W. Hope-Johnstone				
			(To be judged at 10.30 A.M. on Wednesday, 23rd June)				
5/-	5/-	75	<b>Mare or Gelding</b> , any age, over 13.2 hands, and not exceeding 14.2 hands—in <i>saddle</i> . . . . .	5	3	2	—
5/-	5/-	76	<b>Mare or Gelding</b> , any age, over 12 hands and not exceeding 13.2 hands—in <i>saddle</i> —to be ridden by boy or girl not exceeding 14 years of age . . . . .	5	3	2	—
5/-	5/-	77	<b>Mare or Gelding</b> , any age, not exceeding 12 hands—in <i>saddle</i> —to be ridden by boy or girl not exceeding 12 years of age . . . . .	5	3	2	—
			<b>PRIZE MONEY BY SOCIETY . . . £30</b>				
			[Ponies in the above Classes to be exhibited on Wednesday only. They must be in the Showyard not later than 9 A.M. on Wednesday and may leave immediately after the afternoon Parade. Boxes are not provided for these ponies.]				

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 26.

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			<p><b>* 1 HIGHLAND and WESTERN ISLAND PONIES</b></p> <p>Judge: John M. Macdonald (To be judged at 2 P.M. on Tuesday, 22nd June)</p> <p><i>President's Champion Medal for best Highland or Western Island Pony</i></p>				
40/-	60/-	78	Stallion born before 1935, not exceeding 14.2 hands	8	5	3	2
40/-	60/-	79	Entire Colt born on or after 1st January 1935, not exceeding 14.2 hands	8	5	3	2
40/-	60/-	80	Mare, any age, not exceeding 14.2 hands, with Foal at foot, or due to foal before 31st July 1937	8	5	3	2
40/-	60/-	81	Yeld Mare or Filly born before 1935, not exceeding 14.2 hands	8	5	3	2
40/-	60/-	82	Filly born on or after 1st January 1935, not exceeding 14.2 hands	8	5	3	2
			<p><b>* Kinmonth Perpetual Gold Challenge Quaich</b> for best Highland or Western Island Pony. An animal winning the Quaich will become ineligible again to compete.</p> <p><b>* Dundee Citizens' Perpetual Silver Challenge Cup</b>, value about £50, for the best Highland or Western Island Pony, "Extra Stock" eligible to compete.</p> <p><b>* Special Prize of £8</b> given by Highland Pony Society for best Male Animal not exceeding 14.2 hands, entered in Classes 78 and 79. "Extra Stock" not eligible to compete.</p> <p><b>* Special Prize of £8</b> given by Highland Pony Society for best Female Animal not exceeding 14.2 hands, entered in Classes 80, 81, and 82. "Extra Stock" not eligible to compete.</p>				
			PRIZE MONEY BY SOCIETY	£50			
			CONTRIBUTED PRIZES	56			

\* See Rule 28.

<sup>1</sup> The Department of Agriculture for Scotland gives £40 towards prizes for Highland and Western Island Ponies.

<sup>2</sup> This Quaich—along with a sum of money to provide a miniature replica in silver annually—was presented by Mrs Moncrieff Wright, Kinmonth, Bridge of Earn, in memory of her husband, the late John Moncrieff Wright of Kinmonth. The winner of the Quaich shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Quaich on each occasion will receive a miniature replica in silver as a memento of his, or her, winning the Quaich. An Exhibitor who shall win the Quaich five times, not necessarily in succession, will receive in lieu of a miniature a full-size replica in silver.

<sup>3</sup> This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933. On this occasion the Cup is offered for the best Highland or Western Island Pony. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Medal as a memento of his winning the Trophy.

<sup>4</sup> The animals winning these Prizes must be entered or accepted for entry in the Highland Section of the National Pony Stud-Book. Competition to be strictly confined to animals passed sound and free from hereditary disease.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 28.**

ENTRY FEES		CLASS	HORSES				PREMIUMS			
Members	Non-Members		SHETLAND PONIES				First	Second	Third	Fourth
			Judge: Douglas D. Murray				£	£	£	£
			(To be judged at 2.30 P.M. on Tuesday, 22nd June)							
			(All to be shown in hand)							
			President's Champion Medal for best Shetland Pony							
35/-	55/-	83	Stallion, not exceeding 10½ hands, born before 1934				8	5	3	2
35/-	55/-	84	Entire Colt, not exceeding 10½ hands, born in 1934 or 1935				8	5	3	2
35/-	55/-	85	Mare, not exceeding 10½ hands, with Foal at foot, or due to foal before 31st July 1937				8	5	3	2
35/-	55/-	86	Yield Mare, not exceeding 10½ hands				8	5	3	2
35/-	55/-	87	Filly, not exceeding 10½ hands, born in 1934 or 1935				8	5	3	2
			<sup>1</sup> Perpetual Silver Challenge Cup, value £50, for best Group of Shetland Ponies drawn from the ordinary Classes, consisting of one male and two females. "Extra Stock" eligible to compete. <sup>2</sup> Silver Medal for the best Shetland Pony of the sex opposite to that of the winner of the President's Medal, entered or eligible for entry in the Shetland Pony Stud-Book.							
			PRIZE MONEY BY SOCIETY . . . £90							

<sup>1</sup> Presented by a few members of the Shetland Pony Stud-Book Society. The winner on each occasion will receive a Shetland Pony Stud-Book Society's Miniature Silver Medal as a memento of winning the Cup.

<sup>2</sup> Given by the Shetland Pony Stud-Book Society.

**Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.**

ENTRY FEES		CLASS	PREMIUMS			
Members	Non- Members		First	Second	Third	Fourth
			£	£	£	£
<b>HORSES</b>						
<b><sup>1</sup> HACKNEYS IN HARNESS</b>						
Judge : Robert H. Mc'Coll						
(To be judged at 11.30 A.M. on Wednesday, 23rd June)						
<b><sup>2</sup> President's Champion Medal for best Animal in the Classes for Hackneys in Harness</b>						
40/-	60/-	88	<b>Stallion, Mare, Filly, or Gelding</b> , any age, in Harness, exceeding 14 hands, to be driven in the ring			
			15	10	5	—
40/-	60/-	89	<b>Stallion, Mare, Filly, or Gelding</b> , any age, in Harness, 14 hands and under, to be driven in the ring			
			10	5	3	—
PRIZE MONEY BY SOCIETY			£48			
[Hackneys in Harness Classes must be in the Showyard not later than Tuesday evening, judged on Wednesday, and may leave the Showyard on Thursday immediately after the Afternoon Parade.]						
Shed accommodation for machines for Driving Com- petitions—Members, 10s. ; Non-Members, 20s.						
<b>DRAUGHT GELDINGS IN HARNESS</b>						
Judge : James Gray						
(To be judged at 11.30 A.M. on Friday, 25th June)						
5/-	10/-	90	<b>Draught Gelding</b> , any age, in Harness, shown in Cart or Lorry (and driven by single driver), it being a condition that the Horse must have been regularly worked for a period of 12 weeks prior to the first day of the Show. To be exhibited on Friday, 25th June. Only the prize-winners to take part, as required, in the Parade on Friday. The Class will be cancelled if a minimum number of seven entries is not received. Prize Money— £10, £5, £3, £2.			
PRIZE MONEY BY SOCIETY			£20			
(Geldings entered in the Ordinary Classes are not eligible for entry in Class 90.)						
[Note. — Entries in Class 90 close on 15th June. The entries to appear in the Jumping Programme for Friday, 25th June.]						
PRIZE MONEY BY SOCIETY			£885 0			
CONTRIBUTED			66 0			
CUPS, MEDALS, &c.			725 10			
<b>Total Prizes for Horses</b>			<b>£1676 10</b>			
[See Note as to EXTRA STOCK, p. 126]						

<sup>1</sup> Animals entered in other Classes may be entered in the Harness Classes at an additional fee of 5s. if they are eligible.

<sup>2</sup> An animal that has won a President's Champion Medal in another section in this Show shall not be eligible to compete for the Medal in this section.

## JUMPING COMPETITIONS

## 'SPECIAL REGULATIONS

(See also the Regulations on pages 81 to 90)

1. Jumping Competitions will take place on the afternoons of Wednesday, Thursday, and Friday, 23rd, 24th, and 25th June, and on the evenings of Wednesday and Thursday, 23rd and 24th June.
2. Entries for each afternoon Competition will close at the Secretary's Office in the Showyard at 5 P.M. on the preceding day. Entries for Evening Jumping may be received until 5 P.M. on the evening of the Competition.
3. Entry Fees.—Wednesday and Thursday afternoons, £1; Friday, 10s. Evening Jumping, 10s.
4. Accommodation for jumping horses will be provided as follows: Covered shed in which to stand during the day free of charge; or, on application to the Secretary not less than ten days before the opening of the Show, boxes will be provided at a charge (in addition to the Entry Fee) of £1, which must be paid along with the Entry Fee at the time of application.
5. Horses entered for jumping only need not enter the Showyard till 12 noon on the day of Competition, and may leave the Showyard at the close of the jumping.
6. The Jumps may consist of Single Hurdle, Gate, Double Hurdle, Wall, and Water Jump, power being reserved by the Society to alter these, as well as the Handicaps, as may be thought desirable.

ENTRY FEE	CLASS		First	Second	Third	Fourth	Fifth
		<b>WEDNESDAY.</b>					
		<b>AFTERNOON.</b>					
20/-	1	Horse or Pony, any height . . . . .	£ 20	£ 15	£ 10	£ 5	£ 3
		<b>EVENING.</b>					
10/-	2	Horse or Pony, any height, confined to competitors permanently resident in Scotland. The Horse or Pony to have been the property of the competitor since 1st May 1937 . . . . .	10	8	5	3	2
		<b>THURSDAY.</b>					
		<b>AFTERNOON.</b>					
20/-	3	Horse or Pony, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the first prize, and 4 inches for the winner of the second prize in Class 1 . . . . .	20	15	10	5	3
		<b>EVENING.</b>					
10/-	4	Horse or Pony, any height . . . . .	10	8	5	3	2
		<b>FRIDAY.</b>					
		<b>AFTERNOON.</b>					
10/-	5	Horse or Pony, any height, Handicap, hurdles and gate being raised 8 inches for the winner of the first prize, and 4 inches for the winner of the second prize in either of Classes 1 or 3—4 inches extra for the winner of the two first prizes in Classes 1 and 3 . . . . .	15	10	5	3	2
		Champion Prize for most points in Prizes with one horse in Classes 1, 3, and 5—First Prize to count five points; Second Prize, four points; Third Prize, three points; Fourth Prize, two points; and Fifth Prize, one point—the money to be evenly divided in the event of a tie . . . . .	10	—	—	—	—
		<b>Total Prize Money for Jumping, £207.</b>					

*Special Entry Forms for above Competitions to be had on application.*

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<b>S H E E P</b>						
(To be judged at 9.30 A.M. on Tuesday, 22nd June)						
<b>* BLACKFACE</b>						
Judges: James Mitchell; John Struthers						
<i>President's Champion Medal for best Blackface Sheep</i>						
15/-	25/-	91	Tup three shear and over . . . . .	12	8	4 2
15/-	25/-	92	Tup two shear . . . . .	12	8	4 2
15/-	25/-	93	Shearling Tup . . . . .	12	8	4 2
15/-	25/-	94	Tup Lamb . . . . .	5	3	2 -
15/-	25/-	95	Ewe above one shear (born before 1936), with Lamb at foot . . . . .	10	5	3 2
15/-	25/-	96	Shearling Ewe or Gimmer (born in 1936) . . . . .	10	5	3 2
15/-	25/-	97	Ewe Lamb . . . . .	5	3	2 -
<sup>1</sup> Paisley Perpetual Gold Challenge Cup, value £300, for best Blackface Sheep, "Extra Stock" eligible to compete. <sup>2</sup> The "Lochlane" Silver Challenge Cup, value £50, for best Group of three Blackface Sheep, consisting of Ewe, Gimmer, and Ewe Lamb, drawn from above Classes, "Extra Stock" eligible to compete. <sup>3</sup> The "James Archibald" Prize, of about £20, for the best Sheep in the Blackface Classes (excluding Lambs), "Extra Stock" eligible to compete.						
PRIZE MONEY BY SOCIETY . . . . .			£138			
CONTRIBUTED PRIZE . . . . .			20			

\* Formal Declarations must be made at time of entry that the conditions as regards clipping, &c., have been strictly adhered to (see Rule 48).

<sup>1</sup> This Cup, along with an endowment of £800, was provided from money collected in Paisley by the late Provost Muir M'Kean, and is in commemoration of the Society's first Show at Paisley in 1913. This year the Cup is offered for the best Blackface Sheep. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner of the Cup on each occasion will receive a miniature replica in silver as a memento of his winning the Cup.

<sup>2</sup> Presented by Mr and Mrs Francis A. Rottenburg, Lochlane, Crieff. The Cup will become the property of an Exhibitor who shall win it five times, not necessarily in succession.

<sup>3</sup> This Prize consists of the annual free income from a fund of £800, gifted by the late David Archibald, Christchurch, New Zealand, to found a Prize to be offered at the Annual Shows of the Society in commemoration of his brother, the late James Archibald, Overshiels, Stow.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<b>SHEEP</b>						
<b>CHEVIOT</b>						
Judges : Simon Dodd ; James B. H. Young						
<i>President's Champion Medal for best Cheviot Sheep</i>						
15/-	25/-	98	Tup above one shear . . . . .	12	8	4 2
15/-	25/-	99	Shearling Tup . . . . .	12	8	4 2
15/-	25/-	100	Tup Lamb . . . . .	5	3	2 -
15/-	25/-	101	Ewe above one shear, with Lamb at foot . . . . .	10	5	3 2
15/-	25/-	102	Shearling Ewe or Gimmer . . . . .	10	5	3 2
15/-	25/-	103	Ewe Lamb . . . . .	5	3	2 -
<sup>1</sup> Borthwick Perpetual Challenge Cup, value £25, gifted by Mr J. Borthwick, for best Sheep in the Cheviot Classes, "Extra Stock" eligible to compete.						
PRIZE MONEY BY SOCIETY . . . . £112						

<sup>1</sup> Given by the Cheviot Sheep Society.



ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
<b>SHEEP</b>						
<b>BORDER LEICESTER</b>						
Judges : Charles H. Dickie ; James L. Whyte						
<i>President's Champion Medal for best Border Leicester Sheep</i>						
15/-	25/-	104	Tup above one shear . . . . .	12	8	4 2
15/-	25/-	105	Shearling Tup . . . . .	12	8	4 2
15/-	25/-	106	Tup Lamb . . . . .	10	5	3 2
15/-	25/-	107	Ewe above one shear . . . . .	10	5	3 2
15/-	25/-	108	Shearling Ewe or Gimmer . . . . .	10	5	3 2
15/-	25/-	109	Ewe Lamb . . . . .	5	3	2 -
<sup>1</sup> Gold Medal for best Male Animal in the Border Leicester Classes, registered or eligible for registra- tion in the Border Leicester Flock Book. Animals entered as "Extra Stock" not eligible.						
<sup>1</sup> Gold Medal for best Female Animal in the Border Leicester Classes, registered or eligible for registra- tion in the Border Leicester Flock Book. Animals entered as "Extra Stock" not eligible.						
PRIZE MONEY BY SOCIETY . . . £122						

<sup>1</sup> Given by the Society of Border Leicester Sheep Breeders.

ENTRY FEES			CLASS	PREMIUMS		
Members	Non-Members	First		Second	Third	
£	£	£		£	£	£
<b>SHEEP</b>						
<b>HALF-BRED</b>						
Judge : Thomas A. Sproat						
<i>President's Champion Medal for best Half-Bred Sheep</i>						
15/-	25/-	110	Shearling Tup . . . . .	10	7	3
15/-	25/-	111	Ewe above one shear . . . . .	10	5	2
15/-	25/-	112	Shearling Ewe or Gimmer . . . . .	10	5	2
15/-	25/-	113	Ewe Lamb . . . . .	5	3	2
PRIZE MONEY BY SOCIETY . . .				£64		
<b>OXFORD DOWN</b>						
Judge : John M. Eady						
<i>(All sheep to be entered or eligible for entry in the Flock-Book)</i>						
<i>President's Champion Medal for best Oxford Down Sheep</i>						
15/-	25/-	114	Shearling Tup . . . . .	8	5	3
15/-	25/-	115	Shearling Ewe or Gimmer . . . . .	8	5	3
15/-	25/-	116	Tup Lamb . . . . .	8	5	3
15/-	25/-	117	Ewe Lamb . . . . .	5	3	2
PRIZE MONEY BY SOCIETY . . .				£47		
1 CONTRIBUTED PRIZES . . .				11		

<sup>1</sup> Given by Oxford Down Sheep-Breeders' Association.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First £	Second £	Third £	
<div>SHEEP</div> <div>SUFFOLK</div> <div>Judge : H. Groom</div> <div>(All sheep to be entered or eligible for entry in the Flock-Book)</div> <div>President's Champion Medal for best Suffolk Sheep</div>						
15/-	25/-	118	Tup one shear and over . . . . .	10	7	3
15/-	25/-	119	Shearling Ewe or Gimmer . . . . .	10	5	2
15/-	25/-	120	Tup Lamb . . . . .	10	5	2
15/-	25/-	121	Ewe Lamb . . . . .	5	3	2
<div><sup>1</sup> Silver Challenge Cup, value £15, offered by the Suffolk Sheep Society for best Group of Suffolk Sheep, consisting of one Tup, one shear and over, one Shearling Ewe or Gimmer, one Tup Lamb, and one Ewe Lamb—the Females and Tup Lamb must be bred by Exhibitor—drawn from above Classes. The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession.</div>						
PRIZE MONEY BY SOCIETY . . . . .				£64		
<div>PRIZE MONEY BY SOCIETY . . . . . £547 0</div> <div>CONTRIBUTED . . . . . 31 0</div> <div>CUPS, MEDALS, &amp;c. . . . . 410 0</div> <div>Total Prizes for Sheep <div>£988 0</div></div>						
[See Note as to EXTRA STOCK, p. 126.]						

<sup>1</sup> Given by the Suffolk Sheep Society.

ENTRY FEES		CLASS	GOATS		PREMIUMS			
Members	Non-Members				First	Second	Third	
			(To be judged at 9.30 A.M. on Tuesday, 22nd June)					
			Judge : T. W. Palmer			£	£	£
REGULATIONS FOR GOAT CLASSES.								
The animals will be milked dry at 7 o'clock on the evening previous to the opening of the Show, in the presence of, and to the satisfaction of, the Steward or a representative of the Society duly authorised by him.								
All exhibits must be registered either in the Herd-Book, Foundation Book or Show Register of the British Goat Society, in the name of the Exhibitor (the registered number being quoted on the entry form), or, if previously entered or owned by someone other than the Exhibitor, a transfer of ownership must be registered with the British Goat Society.								
<i>President's Champion Medal for best animal in the Goat Classes</i>								
5/-	10/-	122	Female Goat, any age, in milk, entered in or eligible for the Toggenburg Section or the British Toggenburg or British Alpine Section or Register of the Herd-Book			3	2	1
5/-	10/-	123	Female Goat, any age, in milk, entered in or eligible for the Saanen Section or the British Saanen Section or Register of the Herd-Book			3	2	1
5/-	10/-	124	Female Goat, any age, in milk. Any other variety			3	2	1
5/-	10/-	125	Goatling, over one but not exceeding two years, entered in or eligible for the Toggenburg Section or the British Toggenburg or British Alpine Section or Register of the Herd-Book			3	2	1
5/-	10/-	126	Goatling, over one but not exceeding two years. Any other variety			3	2	1
5/-	10/-	127	Female Kid, not exceeding one year. Any variety			3	2	1
5/-	10/-	128	Male Kid, not exceeding one year. Any variety			3	2	1
5/-	10/-	129	Milking Competition, for quality, open to Classes 122, 123, and 124			3	2	1
5/-	10/-	130	Milking Competition, for quantity, open to Classes 122, 123, and 124			3	2	1
1 Challenge Cup, value 20 Guineas, for the best Female Goat in the Show.								

The Competition for Goats is recognised by the British Goat Society, Roydon Road, Diss, Norfolk, which will give Challenge Certificates (qualifying for a Championship) for the best Female Goat over two years that has borne a kid; for the best dual purpose Goat over two years that has borne a kid; and a Bronze Medal for the best female exhibit in Classes 122 to 127 inclusive.

<sup>1</sup> Given by the late Lord Dewar, London—to be competed for annually.

ENTRY FEES		CLASS	GOATS	PREMIUMS		
Members	Non-Members			First	Second	Third
			<p><b>REGULATIONS FOR MILKING COMPETITION</b> (CLASSES 129 AND 130).</p> <p><i>Goats entered for this Competition must be entered in both the Quality and Quantity Classes.</i></p> <p>The animals will be milked at 7 P.M. on Wednesday, 23rd June, at an appointed place in the order arranged by the Steward, and the milk of the next twenty-four hours will be taken for the Quality and Quantity Milking Competitions. The hours of milking shall be 7 A.M. and 7 P.M. on Thursday, 24th June.</p> <p>The prizes will be awarded according to the following scale of points:—</p> <p>For each pound of milk . . . . . 1 point.  For each complete 10 days the Goat has been in milk, with a maximum of 3·6 points <math>\frac{1}{10}</math> of a point.  For each <math>\frac{1}{2}</math> lb. of fat in the milk . . . . . 5 points.  In cases where the milk contains less than 3 per cent of fat 1 point will be deducted.</p> <p>In the Quantity Milking Competition points will be awarded for quantity and lactation only.</p> <p>The period of lactation to be calculated from the date of kidding to the first day of the Show. No prize will be awarded to a Goat giving less than 5<math>\frac{1}{2}</math> lbs. of milk per day.</p> <p>Fractions of lbs. of milk and percentages of fat to be worked out in decimals and added to the total points.</p> <p>A Certificate giving the last date of kidding, signed by the owner of the Goat exhibited, or his Agent, must in every case be brought to the Steward of Goats as soon as possible after the animal has arrived in the Showyard. Any Goat that has not kidded within two years preceding the date of the Show may not compete.</p> <p>The milk yielded by Goats in the Showyard shall be the property of the Society.</p> <p><b>Note.</b>—No animal is allowed to compete in more than one Class, except that Goats entered in Classes 122, 123, and 124 may also be entered in Classes 129 and 130.</p>	£	£	£
			<p>PRIZE MONEY BY SOCIETY . . . . . £42 0</p> <p>DEPARTMENT OF AGRICULTURE FOR SCOTLAND . . . . . 12 0</p> <p>CUP . . . . . 21 0</p> <p><b>Total Prizes for Goats . . . . . £75 0</b></p>			
			[See Note as to EXTRA STOCK, p. 126.]			

ENTRY FEES		CLASS	PREMIUMS			
Members	Non- Members		First	Second	Third	
			£	£	£	
<b>* PIGS</b>						
(To be judged at 9.30 A.M. on Tuesday, 22nd June)						
<b>LARGE WHITE</b>						
Judge : Alfred Lewis						
(All Large White Pigs to be entered or eligible for entry in the Herd-Book of the National Pig-Breeders' Association)						
<i>President's Champion Medal for best Large White Pig</i>						
15/-	25/-	131	Boar born before 1936	8	4	2
15/-	25/-	132	Boar born in 1936 before 1st July	8	4	2
15/-	25/-	133	Boar born in 1936 on or after 1st July	6	4	2
15/-	25/-	134	Boar born in 1937	6	3	1
15/-	25/-	135	Sow born before 1936	8	4	2
15/-	25/-	136	Sow born in 1936 before 1st July	8	4	2
15/-	25/-	137	Sow born in 1936 on or after 1st July	6	4	2
15/-	25/-	138	Sow born in 1937	6	3	1
 <sup>1</sup> Dundee Citizens' Perpetual Silver Challenge Cup, value about £50, for the best Large White Pig, "Extra Stock" eligible to compete.						
<sup>2</sup> Gold Medal, value £5 (or cash), for best Large White Boar, "Extra Stock" eligible to compete.						
<sup>2</sup> Gold Medal, value £5 (or cash), for best Large White Sow, "Extra Stock" eligible to compete.						
<sup>2</sup> Special Prizes for Groups of four Large White Pigs bred by Exhibitor. One Boar (at least) must be included in the Group, and not more than one entry to be selected from any one Class. "Extra Stock" eligible to compete.						
				5	3	2
PRIZE MONEY BY SOCIETY				£95		
<sup>2</sup> CONTRIBUTED				15		

\* See Rule 35.

<sup>1</sup> This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society, and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Medal as a memento of his winning the Trophy.

<sup>2</sup> Given by the National Pig-Breeders' Association.

ENTRY FEES			CLASS	PREMIUMS		
Members	Non-Members	First		Second	Third	
* PIGS						
LARGE BLACK						
Judge: F. W. Gilbert						
President's Champion Medal for best Large Black Pig						
15/-	25/-	139	Boar born before 1937	8	4	2
15/-	25/-	140	Boar born in 1937	6	3	1
15/-	25/-	141	Sow born before 1936	8	4	2
15/-	25/-	142	Sow born in 1936	8	4	2
15/-	25/-	143	Sow born in 1937	6	3	1
<sup>1</sup> Silver Medal for the best Large Black Boar						
<sup>1</sup> Silver Medal for the best Large Black Sow.						
PRIZE MONEY BY SOCIETY				£57		
<sup>1</sup> CONTRIBUTED PRIZES				5		
-----						
PRIZE MONEY BY SOCIETY				£152	0	
CONTRIBUTED				20	0	
CUPS, MEDALS, &c.				60	0	
Total Prizes for Pigs				£232	0	

\* See Rule 35.

<sup>1</sup> Given by the Large Black Pig Society.**EXTRA STOCK**

(FORMER WINNERS NOT ELIGIBLE FOR ORDINARY CLASSES)

Former winners not eligible for Ordinary Classes may be exhibited as Extra Stock, and may receive Awards as follows:—

	£	£	£
<b>Cattle</b> . . . . .	10	5	3
<b>Horses</b> —Clydesdales and Hunters . . . . .	10	5	3
Highland and Western Island Ponies, Shetland Ponies, Hackneys in Harness, and Draught Geldings in Harness	5	3	2
Riding Ponies (Classes 75 to 77) . . . . .	3	2	1
<b>Sheep</b> —Blackface, Cheviot, and Border Leicester . . . . .	5	3	2
Other breeds . . . . .	3	2	1
<b>Goats and Pigs</b> . . . . .	3	2	1

Animals entered as Extra Stock are eligible to compete for the President's Medals, whether former winners of these Medals or not. They are also eligible to compete for Special Prizes where the conditions of these Prizes permit.

While every endeavour will be made to see that former winners are correctly entered in the Catalogue as "Extra Stock," the Society accepts no responsibility for this, it being the duty of Exhibitors to state clearly on the Entry Form the Show at which the animal became disqualified for the Ordinary Classes. If an animal appears in the Catalogue as entered in an Ordinary Class which should appear as "Extra Stock," it cannot thereafter be transferred to the "Extra Stock" Section.

*Entry Fees—same as corresponding Classes*

## \* POULTRY

(To be judged at 9.30 A.M. on Tuesday, 22nd June)

Entries close 12th May

Judges: H. Inman, Classes 1 to 16; and 55 to 81. W. W. Broomhead, Classes 17 to 34; and 98 to 118. P. D. Nairn, Classes 35 to 54; and 82 to 91.

<sup>1</sup> **Champion Challenge Silver Salver**, value £30, for the best exhibit in the Poultry Classes.

*First Premium*—TWENTY SHILLINGS; *Second Premium*—TEN SHILLINGS. In each Class in which there are four or more entries a *Third Prize of Five Shillings* may be awarded, provided there is sufficient merit in the pens. In addition to the Premiums, the Judges may award *one* Very Highly Commended, *one* Highly Commended, and as many Commended tickets in each Class as they consider justified by the number and merit of the entries.

*Champion Silver Medals* are offered as follows:—

- |                                |                                       |
|--------------------------------|---------------------------------------|
| 1. Best Cock, any Variety.     | 5. Best Waterfowl.                    |
| 2. Best Hen, any Variety.      | 6. Best Turkey.                       |
| 3. Best Cockerel, any Variety. | 7. Best Utility Bird (Classes 82-97.) |
| 4. Best Pullet, any Variety.   |                                       |

Aged Birds must have been hatched previous to, and Cockerels and Pullets in, the year of the Show.

*Entry Fees*—Members, 2s. 6d.; Non-Members, 4s.

LEGHORN—	Class	ORPINGTON—continued.	Class
<i>White</i> . . .	1. Cock	<i>Any other Colour</i> . . .	25. { Cock or Cockerel
	2. Hen		26. { Hen or Pullet
	3. Cockerel		
<i>Any other Colour</i> . . .	4. Pullet	WYANDOTTE—	
	5. Cock	<i>White</i> . . .	27. Cock
	6. Hen		28. Hen
	7. Cockerel		29. Cockerel
	8. Pullet		30. Pullet
MINORCA . . .	9. Cock	<i>Partridge or Columbian</i> . . .	31. { Cock or Cockerel
	10. Hen		32. { Hen or Pullet
	11. Cockerel		33. { Cock or Cockerel
	12. Pullet	<i>Any other Colour</i> . . .	34. { Hen or Pullet
SOOTH GRAY . . .	13. Cock		
	14. Hen	RHODE ISLAND RED . . .	35. Cock
	15. Cockerel		36. Hen
	16. Pullet		37. Cockerel
PLYMOUTH ROCK—			38. Pullet
<i>Barred</i> . . .	17. Cock	SUSSEX—	
	18. Hen	<i>Light</i> . . .	39. Cock
	19. Cockerel		40. Hen
	20. Pullet		41. Cockerel
<i>Any other Colour</i>	21. { Cock or Cockerel		42. Pullet
	22. { Hen or Pullet	<i>Any other Variety</i> . . .	43. Cock
ORPINGTON—			44. Hen
<i>Black</i> . . .	23. { Cock or Cockerel		45. Cockerel
	24. { Hen or Pullet		46. Pullet

<sup>1</sup> Given by the late Lord Dewar. The Salver will become the property of an exhibitor who shall win it three times, not necessarily in succession.

*Special Entry Forms for Poultry Classes.*

\* See Regulations 66 and 67.



DORKING—		Class	UTILITY POULTRY—contd.		Class
<i>Coloured</i>		47. Cock	<i>Any other Variety—heavy breed</i>	87.	{ Cock or Cockerel
		48. Hen			
		49. Cockerel	<i>Leghorn—White</i>	88.	{ Hen or Pullet
		50. Pullet			
<i>Silver Grey</i>		51. Cock	<i>Leghorn—any other Colour</i>	89.	{ Hen or Pullet
		52. Hen			
		53. Cockerel	<i>Wyandotte—any Colour</i>	90.	{ Hen or Pullet
		54. Pullet			
<b>SCOTS DUMPS</b>		55. Cock	<i>Rhode Island Red</i>	91.	{ Hen or Pullet
		56. Hen			
		57. { Cockerel or Pullet	<i>Barnevelder</i>	92.	{ Hen or Pullet
<b>BARNEVELDER</b>		58. Cock	<i>Rock—any Colour</i>	93.	{ Hen or Pullet
		59. Hen			
		60. Cockerel	<i>Welsummer</i>	94.	{ Hen or Pullet
		61. Pullet			
<b>INDIAN GAME</b>		62. Cock	<i>Any other Variety</i>	95.	{ Hen or Pullet
		63. Hen			
		64. Cockerel			
		65. Pullet			
<b>OLD ENGLISH GAME</b>		66. Cock	<b>ANY CROSS FOR LAYING PURPOSES</b> } 96. Hen		
		67. Hen			
		68. Cockerel	<b>ANY CROSS FOR LAYING PURPOSES</b> } 97. Pullet		
		69. Pullet			
<b>BANTAM—</b>			<b>DUCKS—</b>		
<i>Game—Old English</i>		70. Cock	<i>Aylesbury</i>	98.	Drake
		71. Hen		99.	Duck
<i>Game—Modern</i>		72. Cock	<i>Orpington</i>	100.	{ Drake (young)
		73. Hen		101.	{ Duck (young)
<i>Other than Game</i>		74. Cock		102.	Drake
		75. Hen		103.	Duck
<i>Any Variety</i>		76. Cockerel		104.	{ Drake (young)
		77. Pullet		105.	{ Duck (young)
<b>ANY OTHER RECOGNISED BREED OF POULTRY</b>		78. Cock	<i>Indian Runner</i>	106.	Drake
		79. Hen		107.	Duck
		80. Cockerel		108.	Drake
		81. Pullet	109.	Duck	
<b>UTILITY POULTRY—</b>			<b>GESE.</b>	110.	Gander
<i>Leghorn—any Variety</i>		82. { Cock or Cockerel		111.	Goose
	<i>Any other Variety—light breed</i>	83.		{ Cock or Cockerel	
<i>Wyandotte—any Colour</i>		84.	{ Cock or Cockerel	<b>TURKEYS</b>	112.
		85.	{ Cock or Cockerel		113.
<i>Rhode Island Red</i>		86. { Cock or Cockerel	<b>TABLE POULTRY—</b>		
				<i>Any pure Breed</i>	114.
<i>Welsummer</i>		86. { Cock or Cockerel	<i>Any Cross</i>	115.	Cockerel
				116.	Cock
			117.	Cockerel	
			<i>Any Pure Breed or Cross</i>	118.	{ Pair of Pullets

AMOUNT OF POULTRY PREMIUMS, £206, 10s.

*Special Entry Forms for Poultry Classes.*

## \* DAIRY PRODUCE

*To be judged at 9.30 A.M. on Tuesday, 22nd June)*

Judge : Mrs Prentice

No Exhibitor to show more than **one lot** in any Class

**Entry Fees**—Members, 5s. ; Non-Members, 7s. 6d.

Class.	Premiums.				
	1st.	2nd.	3rd.	4th.	5th.
	£	£	£	£	£
1. Powdered Butter, not less than 8 lb. . . . .	4	3	2	1	-
2. Fresh Butter, three 1-lb. lots, to be made up in form of bricks . . . . .	4	3	2	1	-
3. Cheddar Cheese, 56 lb. and upwards . . . . .	9	5	3	2	1
4. Cheese, 14 lb. and under . . . . .	5	3	2	1	-
Total . . . . .	£51				

*Special Entry Forms for Dairy Produce.*

\* See Regulations 75 and 76.

**Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 96-98**

## HONEY, &c.

(To be judged at 10 A.M. on Tuesday, 22nd June)

Judge: David Emslie

### OPEN CLASSES

Class.	Entry Fees—2s. 6d. each.	Premiums.		
		1st.	2nd.	3rd.
1. Collection of Appliances suitable for a beginner's outfit for Bee-keeping. A card naming all the articles, along with the price at which they will be supplied for one year from date, to be fixed to the exhibit		20/-	15/-	10/-
2. Best and most complete Frame Hive for general use, with any improvements. Unpainted		20/-	15/-	10/-
3. Best and most complete Hive. Unpainted. Price not to exceed 35/-		20/-	15/-	10/-
4. Six Sections of Comb Honey, excluding Heather Honey		20/-	15/-	10/-
5. Six Sections of Heather Honey		20/-	15/-	10/-
6. Six Jars of Run or Extracted Light-coloured Honey, approximate weight 6 lb.		20/-	15/-	10/-
7. Six Jars of Run or Extracted Medium or Dark-coloured Honey, excluding Heather Honey, approximate weight 6 lb.		20/-	15/-	10/-
8. Six Jars of pressed Heather Honey in liquid form, approximate weight 6 lb.		20/-	15/-	10/-
9. Six Jars of Granulated Honey, approximate weight 6 lb.		20/-	15/-	10/-
10. Two shallow Frames of Comb Honey for extracting purposes		20/-	15/-	10/-
11. Best display of Honey in any form suitable for a shop window in space 4 feet by 4 feet. Weight of honey not to exceed 40 lb.		60/-	30/-	20/-
12. Best exhibit of not less than 1 lb. of Wax in any form		20/-	15/-	10/-
13. Best exhibit of not less than 1 lb. of Wax made into shapes for retail trade and over-counter trade. Convenience in packing to be taken into consideration		20/-	15/-	10/-
14. Observatory Hive with Queen and Bees—two or more frames		50/-	30/-	20/-
15. Observatory Hive with Queen and Bees—one frame, no super		40/-	30/-	15/-

#### (Confined to Scottish Exhibitors.)

16. One Standard Frame of Comb Honey for extracting purposes	20/-	15/-	10/-
17. Six Sections of Comb Honey, excluding Heather Honey	20/-	15/-	10/-
18. Six Sections of Heather Honey	30/-	20/-	10/-
19. Six Jars of Run or Extracted Medium or Dark-coloured Honey, excluding Heather Honey, approximate weight 6 lb.	30/-	20/-	10/-
20. Six Jars of pressed Heather Honey in liquid form, approximate weight 6 lb.	20/-	15/-	10/-
21. Six Jars of Run or Extracted Light-coloured Honey, approximate weight 6 lb.	30/-	20/-	10/-

### SILVER CUP OR TAZZA.

Presented by the late Mr R. Y. HOWIE, Rutherglen.

1. To be competed for annually at the Highland and Agricultural Society's Show, and awarded to the competitor gaining most points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point. In the event of a tie, the competitor having most first prizes to be adjudged the winner. The winner, until the trophy is won outright, shall hold the Cup for one year.

2. The Cup to be won outright by the competitor first winning it three times within five years.

3. Any competitor having official connection with an Agricultural College shall not be eligible to compete for the Cup.

Silver and Bronze Medals will be awarded by the Scottish Bee-Keepers' Association to the First and Second winners of the greatest number of points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point.

PRIZE MONEY BY SOCIETY	£47, 0s. 0d.
CONTRIBUTED BY SCOTTISH BEE-KEEPERS' ASSOCIATION	£10, 10s. 0d.
SILVER CUP OR TAZZA PRESENTED BY THE LATE MR R. Y. HOWIE	£6, 0s. 0d.

*Special Entry Forms for Appliances and Honey.*

### RULES AND REGULATIONS.

1. All exhibits must be despatched in time to be delivered at the Showyard not later than 6 P.M. on Monday, the day before the opening of the Show. Under the railway regulations, exhibitors will require to pay return carriage and cartage when despatching. Return carriage-paid labels will be supplied by the Secretary, and must be addressed for the return journey, and have numbers of Classes on same. Non-compliance with this regulation will mean that the exhibit will be left in the Showyard. **Boxes containing hives, jars, or sections must be screwed and not nailed, and the hives, bottles, and sections so placed that they can be lifted out and replaced without disturbing the packing.**

2. The number of the exhibit will be sent by the Secretary (as entered on the printed slip) and must be placed on every exhibit viz., **Jars:** on side of jar about half an inch from the foot. **Sections and Frames:** at right top corner of the glass. **Wax:** at right top corner of the glass. Also on **1 lb. Cakes:** on the underside. No goods will be staged unless this rule is complied with. All competitors must leave the Bee Shed by 9 A.M. on Tuesday morning.

3. No card, trade mark, or name of the exhibitor may be placed upon any part of an exhibit. Every article exhibited must be the property of the exhibitor, and all honey must have been gathered in the natural way with Great Britain, Northern Ireland, and Irish Free State, by bees the property of the exhibitor.

4. Comb Honey Sections,  $4\frac{1}{2}$  inches by  $4\frac{1}{2}$  inches, to be staged in cardboard boxes glazed on both sides, showing not less than  $3\frac{1}{2}$  inches by  $3\frac{1}{2}$  inches of comb surface clear of points of lacing, but allowing easy access to the Judge. Sections with fixed glass will be disqualified.

Shallow Frames,—no paper edging is permissible and each frame must be exhibited in a separate glazed case.

5. All Run, Extracted, and Granulated Honey must be shown in the usual mercantile Glass Jars holding approximately 1 lb., except in Class 11.

6. No exhibitor shall be allowed to take more than one prize in any one class.

7. The Judge shall be empowered to withhold prizes in case of insufficient merit.

8. Should there be in any class three or less than three entries, the value of the first prize may be reduced at the discretion of the Judge to that of the second, the second to that of the third, and no third prize will be awarded.

9. The Judge will commence his inspection at 10 A.M. on Tuesday, and the Bee Shed will be closed to the public during the judging.

10. Exhibits of Honey may be placed in their positions in the shed before the opening and removed at the close of the Show by exhibitors themselves or their representatives. In the event of neither the exhibitor nor a person with written authority from the exhibitor being present to place or remove the exhibits, they will be placed and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of the exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. In the case of exhibits which are not removed by 5.30 P.M. on the closing day of the Show, the Society will hold itself at liberty to hand them over to the railway companies for despatch to the respective exhibitors.

11. No lot can be removed from the yard till 4 P.M. on Friday, the last day of the Show.

12. The Society undertakes no responsibility for the receipt or despatch of exhibits, nor for any injury exhibits may sustain during the Show or otherwise.

13. Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 86-88.

## RURAL INDUSTRIES

(To be judged at 9.30 A.M. on Tuesday, 22nd June)

Judges: Miss Bruce, Classes 1, 2, 3, 4, 5, 6, 7, 8, 9, 18, 19, 20, 25 and 26.\* Henry G. Paterson, Classes 14, 15, 16 and 17. Miss A. C. McCredie, Classes 10, 11, 12, 13, 21, 22, 23 and 24.

*Entry Fee, 2s. 6d. each article.*

*Separate entry for each article.*

### OPEN CLASSES.

#### SHETLAND KNITTING.

Class.	<i>Exhibits to be made from Shetland Wool.</i>	Premiums.		
		1st.	2nd.	3rd.
1.	Fine Lace Shawl or Scarf . . . . .	£3	£2	£1
2.	Fine Lace Goods other than above . . . . .	3	2	1
3.	Jumper or Cardigan—with or without sleeves . . . . .	3	2	1
4.	Exhibits other than above . . . . .	2	1	10/-

#### TWEEDS.

5.	Harris or other Tweed—Hand-woven . . . . .	3	2	1
6.	Tartan—Vegetable-dyed and Hand-woven . . . . .	3	2	1
7.	Carriage Rug or Plaid—Hand-woven . . . . .	3	2	1

#### MISCELLANEOUS.

8.	Hook-Through Floor Rug (new wool) . . . . .	3	2	1
9.	Any other variety Floor Rug (new wool) . . . . .	3	2	1
10.	Specimen of White Embroidery—to be exhibited unwashed . . . . .	3	2	1
11.	Specimen of Coloured Embroidery—silk or cotton (canvas work not eligible) . . . . .	3	2	1
12.	Specimen of Coloured Embroidery—woolwork (canvas work not eligible) . . . . .	3	2	1
13.	Specimen of Old English Quilting . . . . .	3	2	1
14.	Pair of Leather Gloves . . . . .	2	1	10/-
15.	Specimen of Leather Work other than Gloves . . . . .	2	1	10/-
16.	" Hand-painted Pottery . . . . .	2	1	10/-
17.	" Woodcraft (small article) . . . . .	2	1	10/-
18.	Home-spun Yarn—2-3 cuts . . . . .	2	1	10/-
19.	Specimen of Hand-made Lace other than Crochet . . . . .	3	2	1
20.	Men's Golf or Kilt Hose . . . . .	2	1	10/-
				£102 10

**RURAL INDUSTRIES—continued.****CONFINED CLASSES.**

**Open to Women's Rural Institutes and Members thereof in the whole of Scotland.**

	Premiums.		
	1st.	2nd.	3rd.
21. Specimen of Canvas Work . . . . .	£3	£2	£1
22. " Corded Quilting . . . . .	3	2	1
23. Embroidered Traycloth and Cosy on Pad . . . . .	2	1	10/-
24. Child's Frock—embroidered or smocked . . . . .	2	1	10/-
25. Hand-woven Scarf . . . . .	2	1	10/-
26. Pair of Socks, 4 ply, plain knitting . . . . .	2	1	10/-
	<hr/>		
	£26		
<b>PRIZE MONEY BY SOCIETY . . . . .</b>	£128 10		

**NOTE.**—(a) No exhibit may be entered in more than one Class.

(b) All exhibits must have been completed within the twelve months preceding the Show.

(c) No exhibit mounted under glass will be accepted at the Show

**REGULATIONS.**

1. The Competition, except where otherwise stated, is open to competitors from all parts of Great Britain, Northern Ireland, and Irish Free State. Societies or Institutes, as well as individuals, shall be allowed to compete.

2. Every exhibit must be the work either of the exhibitor or of a member of the exhibiting Society or Institute, and must have been completed within the twelve months preceding the Show.

3. An entry fee of 2s. 6d. for each exhibit is payable at the time of entry.

4. Exhibits will be received in the Showyard not later than 3 P.M. on Monday, the day before the opening of the Show. Judging will commence at 9 A.M. on Tuesday. The section will be closed to the public during the judging. Exhibits shall not be removed till after the close of the Show.

5. In no case shall a prize be awarded unless the Judge deems the exhibit to have sufficient merit; and where only one or two articles are entered in a class, and the Judge considers them unworthy of the prizes offered, it shall be in his or her power to award a lower prize.

6. Exhibits shall be entirely at the risk of exhibitors, who shall be solely responsible for delivery and removal of their own exhibits. In the event of neither the exhibitor nor a person with written authority from the exhibitor being present to remove exhibits, these will be removed by persons hired and paid by the Society. The placing and despatching of exhibits will be done on the understanding that the persons are hired to do the work on behalf of the exhibitors and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. A receipt signed by the exhibitor, on a form to be issued by the Secretary, must be delivered before any exhibit is handed over to the exhibitor or his or her representative.

On the last day of the Show the Shed will be closed to the public at 4.45 P.M., but no exhibit may be removed until 5 P.M.

7. Exhibitors shall be allowed to attach to their exhibits a notice indicating where (in the Showyard or elsewhere) similar articles may be purchased.

8. Exhibits must not be sent to the Society's Office previous to date of Show. Labels, &c., will be posted to Exhibitors about fourteen days prior to the Show.

9. All exhibits to be sent to the Showyard in packing, sufficiently strong, to be used for return.

10. Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 96-98.

## BUTTERMAKING COMPETITIONS

Judges { *Open*—Alastair A. M. Fisher  
           { *Championship*—William Smith

*Entry Fee, 2s. 6d.*

The Society will hold an open Buttermaking Competition on Wednesday and Thursday, 23rd and 24th June.

The Competitors will be balloted into sections containing, as nearly as possible, an equal number of Competitors, and each section will form a separate competition with separate prizes. The Secretary will forward to Competitors, a few days before the Competitions, a note of the days and hours at which they are required to attend.

The sections and prize money will be as follows :—

### WEDNESDAY, 23RD JUNE.

#### *Open Competition.*

Section 1	.	.	.	.	£5, £3, £2, £1.
Section 2	.	.	.	.	£5, £3, £2, £1.

### THURSDAY, 24TH JUNE.

#### *Open Competition (continued).*

Section 3	.	.	.	.	£5, £3, £2, £1.
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Championship	{	<i>First</i> : Gold Medal.
	{	<i>Second</i> : Silver Medal.

Competitors in the Championship Competition will consist of the First, Second, and Third Prize Winners in each of the Sections 1 to 3 inclusive.

Competitors will be distinguished by Numbers, which, with Competitor's name and address, will be entered in the Catalogue.

The decision of the Directors of the Society in all matters relating to the Competition shall be final.

Entry forms may be obtained from the Secretary, or from Mrs More, Hon. Secretary, British Dairymaids' Association, 16 Rutland Square, Edinburgh, who has kindly agreed to receive entries. These must be lodged *not later than Thursday, 20th May.*

PRIZE MONEY BY SOCIETY, £38.

## HORSE-SHOEING AND SHOE-MAKING

Open to Shoeing-Smiths from any part of Great Britain, Northern Ireland, and Irish Free State.

Horses provided for this Competition cannot be entered in any other Class.

*Special Entry Forms for Horse-Shoeing and Shoe-Making Competitions.*

### HORSE-SHOEING COMPETITION

Judges : George C. Inglis, M.R.C.V.S. ; James Hall ; John Telfer

THURSDAY AND FRIDAY, 24TH AND 25TH JUNE.

#### FARM HORSES.

1st Prize, £5, Gold Watch,* and Gold Medal.	5th Prize, £3.
2nd Prize, £5 and Canteen of Cutlery.†	6th Prize, £2
3rd Prize, £5 and Gold Medal.‡	7th Prize, £2
4th Prize, £4 and Gold Medal.§	8th Prize, £1.
	9th Prize, £1.

\* Gold Watch given by Messrs William Martin, Sons, & Co., Coatbridge.

† Canteen of Cutlery given by Messrs Neilson & Cleland, Ltd., Coatbridge.

|| Gold Medal, given by National Master Farriers' and Blacksmiths' Association, to be awarded to the competitor obtaining the highest number of points in this Class.

‡ Gold Medal given by the Mustad Horse Nail Company.

§ Gold Medal given by Capewell Horse Nail Company.

PRIZE MONEY BY SOCIETY . . . . .	£18
GOLD WATCH AND £5 BY MESSRS WILLIAM MARTIN, SONS, & CO., COATBRIDGE . . . . .	£10
THE SCOTTISH IRON & STEEL CO., LTD., GLASGOW . . . . .	£5
CUTLERY BY MESSRS NEILSON & CLELAND, LTD., COATBRIDGE . . . . .	£4
GOLD MEDAL BY NATIONAL MASTER FARRIERS' AND BLACKSMITHS' ASSOCIATION . . . . .	£4
GOLD MEDAL BY MUSTAD HORSE NAIL CO. . . . .	£2
GOLD MEDAL BY CAPEWELL HORSE NAIL CO. . . . .	£2

TOTAL . . . . . £45

#### REGULATIONS.

1. Entries must be made with the Secretary not later than 28th April. Entry-Fee, 2s. 6d. for each Class. Entry Forms may be had on application.

2. The Competition will take place in the Showyard, and will be decided by points, time being taken into consideration. Each Competitor must make and fix one fore and one hind shoe, having previously taken off the old shoes. The shoes must be fullered, with low calkins, and with toe-pieces on hind shoes only. The use of files and wire brushes is not permitted. Each Competitor must bring his own tools, nails, and a striker. The striker will not be allowed to touch the horse's hoof. The local Blacksmiths' and Farriers' Association will



provide blowers, forges and anvils. The horses to be shod will also be provided by the Association. Forges and horses will be balloted for.

3. Competitors must attend at the Horse-Shoeing Stance half an hour before they are due to compete.

4. The Competitor and his striker will be admitted to the Yard free of charge on the day of Competition on presentation of tickets which will be sent to the Competitor for the purpose.

*Dundivan horse-shoe iron will be used in this Competition and will be supplied by Messrs William Martin, Sons, & Co., Coatbridge. Messrs Neilson & Cleland, Ltd., Coatbridge, will provide the necessary Gartshore smithy coal.*

## SHOE-MAKING COMPETITION

Judges : James Hall ; John Telfer

WEDNESDAY, 23RD JUNE

1st Prize, £5 and Silver Tea Service.\*

4th Prize, £2.

2nd Prize, £4 and Canteen of Cutlery.†

5th Prize, £1.

3rd Prize, £3 and Gold Medal.‡

\* Silver Tea Service given by the Scottish Iron & Steel Co., Ltd., Glasgow.

† Canteen of Cutlery given by Messrs Neilson & Cleland, Ltd., Coatbridge.

‡ Gold Medal given by Mustad Horse Nail Company.

PRIZE MONEY BY SOCIETY . . . . .	£5
SILVER TEA SERVICE AND £5 GIVEN BY THE SCOTTISH IRON & STEEL CO., LTD, GLASGOW . . . . .	£10
WILLIAM MARTIN, SONS, & CO, COATBRIDGE . . . . .	£5
CANTEEN OF CUTLERY GIVEN BY MESSRS NEILSON & CLELAND, LTD., COATBRIDGE . . . . .	£4
GOLD MEDAL GIVEN BY MUSTAD HORSE NAIL COMPANY . . . . .	£2

TOTAL . . £26

## REGULATIONS.

1. Entries must be made with the Secretary not later than 28th April. Entry Fee, 2s. 6d. Entry Forms may be had on application

2. Each Competitor must make one fore shoe and one hind shoe.

3. Each shoe must be made from  $18\frac{1}{2}$ "  $\times$   $1\frac{1}{4}$ "  $\times$   $\frac{9}{16}$ " iron, which will be provided at the Stance.

4. The fore shoe to be fullered and clipped, and the hind shoe fullered, clipped, and toed.

5. The use of files and wire brushes is prohibited.

6. Time allowed will be limited to 40 minutes.

7. Competitors must bring their own tools and a striker, and must attend at Horse-Shoeing Stance 15 minutes before they are due to commence.

8. The Competitor and his striker will be admitted to the Yard free of charge on the day of Competition on presentation of tickets which will be sent to the Competitor for the purpose.

*Waverley horse-shoe iron will be used in this Competition and will be supplied by The Scottish Iron & Steel Co., Ltd., Glasgow. Messrs Neilson & Cleland, Ltd., Coatbridge, will provide the necessary Gartshore smithy coal.*

## LIVE STOCK JUDGING COMPETITION

### *Special Entry Forms for Live Stock Judging Competition.*

1. The Society will hold a Live Stock Judging Competition on Thursday, 24th June, commencing at 10 A.M.

2. The Competition shall be open to all persons 18 years and under 23 years of age at the date of the Competition.

3. Teams from Agricultural Colleges or from Young Farmers' Clubs in Scotland shall be allowed to compete. The members of these teams shall also enter as individual Competitors. Five members shall form a team.

4. Entries must be lodged with the Secretary of the Highland and Agricultural Society not later than 10 A.M. on Thursday, 13th May. An entry fee of 2s. 6d. shall be paid by each Competitor. Entries of teams must be made in the same way, but no additional fee shall be charged for a team over and above the fee of 2s. 6d. for each individual member.

5. The Stock to be judged shall consist of—

(a) Cattle (three classes)	.	.	.	{ Shorthorn. Aberdeen-Angus. Ayrshire or British Friesian.
(b) Horses (two classes)	.	.	.	{ Clydesdales. Blackface.
(c) Sheep (three classes)	.	.	.	{ Cheviot. Border Leicester.

There will be four animals in each class. The animals to be judged shall be chosen by the Society's Stewards. The Society reserves the right to modify the nature of the classes should difficulty arise in finding suitable material amongst the animals exhibited at the Show.

6. In Judging, breed type shall be taken into account. All stock shall be considered free from acquired blemishes or unsoundness. The Competitors shall judge in groups, and ten minutes shall be allowed for the judging of each class.

7. Competitors are forbidden to discuss the Stock with each other, or with any other person, until the conclusion of the whole Competition.

8. The method of awarding points shall be decided by the Directors of the Society, and their decision in all matters relating to the Competition shall be final.

9. Prizes shall be awarded as follows:—

Individual Competition	.	.	.	£5, £4, £3, £2, £1.
Team Competition—				
1st	.	.	.	£10 and 5 Medium Silver Medals.
2nd	.	.	.	£5 and 5 Medium Bronze Medals.
Special Prize for College team placed highest in Competition	.	.	.	£5.

'Glasgow Herald' Challenge Cup, value £50, to be awarded each year to the team winning the First Prize in the Team Competition.

<sup>1</sup> Gold Medal to be awarded to the highest individual scorer.

The Society reserves the right to reduce the number of prizes in the event of there being less than twenty Competitors in the Individual Competition and less than three teams in the Team Competition.

TOTAL PRIZE MONEY BY SOCIETY, £35.

<sup>1</sup> Given by Messrs George Outram & Co., Ltd., Glasgow.

**ABSTRACT OF PREMIUMS.****GIVEN BY THE SOCIETY.**

Cattle . . . . .	£1230 0 0
Horses . . . . .	885 0 0
Jumping Competitions . . . . .	207 0 0
Sheep . . . . .	547 0 0
Goats . . . . .	42 0 0
Pigs . . . . .	152 0 0
Poultry . . . . .	206 10 0
Dairy Produce . . . . .	51 0 0
Honey, &c. . . . .	47 0 0
Rural Industries . . . . .	128 10 0
Buttermaking Competitions . . . . .	33 0 0
Horse-Shoeing and Shoe-Making Competitions . . . . .	23 0 0
Live Stock Judging Competition . . . . .	35 0 0
Medals to Breeders, &c. . . . .	50 0 0
Forestry <sup>1</sup> . . . . .	40 0 0
	<hr/>
	£3677 0 0

**CONTRIBUTED PRIZES, CUPS, &c.**

President's Champion Medals . . . . .	23 0 0
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**CATTLE.**

*Corporation of Edinburgh Perpetual Gold Challenge Cup . . . . .	£100 0 0
*The late Mr William Duthie—Silver Cup . . . . .	150 0 0
*Mr W. M'Nair Snadden—Silver Cup . . . . .	50 0 0
Tweeddale Gold Medal . . . . .	25 0 0
*J. Baird & Co. (Falkirk) Ltd.—Emilio R. Casares, jun.— Memorial Cup . . . . .	52 10 0
The Shorthorn Society (and 2 Medals) . . . . .	40 0 0
*Angus Agricultural Society—Silver Cup . . . . .	52 10 0
*Mr J. E. Kerr—Silver Cup . . . . .	50 0 0
*The late Sir George Macpherson Grant, Bart.—Silver Cup . . . . .	50 0 0
*Mr Eduardo Estanguet, Argentina—Silver Cup . . . . .	52 10 0
*Mr Falconer L. Wallace—Silver Cup . . . . .	50 0 0
Aberdeen Angus Cattle Society—Gold Medal . . . . .	10 0 0
*Galloway Cattle Society—Dr Gillespie Memorial Trophy . . . . .	50 0 0
*Galloway Cattle Society—Silver Cup . . . . .	50 0 0
*Mrs Brown, Kirkbrix, Glasgow—Knockbrix Challenge Cup . . . . .	50 0 0
*General Sir Ian Hamilton, G.C.B.—Silver Cup . . . . .	50 0 0
*Highland Cattle Society of Scotland—Silver Cups . . . . .	89 5 0
*Renfrewshire Perpetual Gold Challenge Cup . . . . .	250 0 0
*Cowhill Champion Cup . . . . .	30 0 0
Ayrshire Cattle Herd-Book Society . . . . .	20 0 0
*Lady Rachel Workman MacRobert—Champion Silver Bell . . . . .	52 10 0
*British Friesian Cattle Society—Silver Cup . . . . .	52 10 0
British Friesian Cattle Society . . . . .	50 0 0
	<hr/>
	1426 15 0
Carry forward . . . . .	£5126 15 0

<sup>1</sup> Grant to Royal Scottish Forestry Society for Forestry Section.

\* Challenge Prizes.

**ABSTRACT OF PREMIUMS—continued**

Brought forward	£5126 15 0
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**HORSES.**

*Fife and Kinross Perpetual Gold Challenge Cup	£200 0 0
*Clydesdale Horse Society—Cawdor Challenge Cups	105 0 0
“William Taylor” Memorial Committee	10 0 0
*Mr William Meiklem, Kirkcaldy—Gold Challenge Cup	115 10 0
*Dumfriesshire Hunt—Dumfries Centenary Silver Challenge Cup	100 0 0
Hunters' Improvement and National Light Horse Breeding Society—Gold Medal	5 0 0
*Mrs Moncrieff Wright—Kinmonth Perpetual Gold Challenge Quaich	100 0 0
*Dundee Citizens' Perpetual Silver Challenge Cup	50 0 0
Department of Agriculture for Scotland	40 0 0
Highland Pony Society	16 0 0
*A few Members of the Shetland Pony Stud-Book Society—Perpetual Silver Challenge Cup	50 0 0
Shetland Pony Stud-Book Society (Medal)	...
	<hr/>
	791 10 0

**SHEEP.**

*Paisley Perpetual Gold Challenge Cup	£300 0 0
*Mr and Mrs Francis A. Rottenburg—“Lochlane” Silver Challenge Cup	50 0 0
“James Archibald” Prize	20 0 0
*Cheviot Sheep Society—Berthwick Perpetual Challenge Cup	25 0 0
Society of Border Leicester Sheep Breeders—Gold Medals	20 0 0
Oxford Down Sheep-Breeders' Association	11 0 0
*Suffolk Sheep Society—Silver Cup	15 0 0
	<hr/>
	441 0 0

**GOATS.**

Department of Agriculture for Scotland	£12 0 0
*The late Lord Dewar—Silver Cup	21 0 0
	<hr/>
	33 0 0

**PIGS.**

*Dundee Citizens' Perpetual Silver Challenge Cup	£50 0 0
National Pig-Breeders' Association—Gold Medals and Prize Money	25 0 0
Large Black Pig Society (and 2 Medals)	5 0 0
	<hr/>
	80 0 0

**POULTRY.**

*The late Lord Dewar—Champion Challenge Silver Salver	30 0 0
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**HONEY.**

The Scottish Bee-Keepers' Association (and 2 Medals)	£10 10 0
The late Mr R. Y. Howie—Silver Cup or Tazza	6 0 0
	<hr/>
	16 10 0
Carry forward	£8518 15 0

\* Challenge Prizes.

**ABSTRACT OF PREMIUMS—continued**

Brought forward . . . . £6618 15 0

**HORSE-SHOEING AND SHOE-MAKING.**

Messrs W. Martin, Sons, & Co., Coatbridge (Gold Watch and £10)	£15 0 0	
The Scottish Iron & Steel Co., Ltd., Glasgow (Silver Tea Service and £10)	15 0 0	
Messrs Neilson & Cleland, Ltd., Coatbridge (Cutlery)	8 0 0	
National Master Farriers' and Blacksmiths' Association (Gold Medal)	4 0 0	
Mustad Horse Nail Co. (2 Gold Medals)	4 0 0	
Capewell Horse Nail Co. (Gold Medal)	2 0 0	
		48 0 0

**STOCK JUDGING COMPETITION.**

* Messrs George Outram & Co., Ltd., Glasgow—'Glasgow Herald' Challenge Cup (and Gold Medal)	50 0 0
	<u>£6618 15 0</u>

\* Challenge Prizes.

JOHN STIRTON, *Secretary.*

8 EGLINTON CRESCENT,  
EDINBURGH 12. *February 1937*

## SILVER MEDALS FOR NEW OR IMPROVED IMPLEMENTS.

See Regulations on page 94.

**FORESTRY EXHIBITION.**

For information as to above, apply to the Secretary, Royal Scottish Forestry Society, 8 Rutland Square, Edinburgh 1.

**The Society's Show for 1938 will be held  
at Dumfries.**

# MEMBERS ADMITTED SINCE THE LIST WAS PUBLISHED IN APRIL 1935.

ARRANGED ACCORDING TO SHOW DISTRICTS.

(ELECTED 3RD JUNE 1936 AND 6TH JANUARY 1937.)

## 1.—GLASGOW DIVISION

### ARGYLL

Admitted  
1936 Carmichael, James R., Creggans,  
Inveraray  
1937 Currie, John J., Culfall Hotel, Kil-  
melford, Oban  
1937 M'Kean, John, Drimlee, Inveraray  
1937 Page, Mrs K. C., Inveraray  
1937 Walker, Mrs William, Foreland,  
Bruichladdich, Islay

### AYR

1937 Bone, John Kerr, Monktonhill,  
Monkton  
1937 Cochran, James G., Messrs John  
J. Inglis & Sons, 14 Alloway Street,  
Ayr  
1936 Gray, James Fulton, Park, Maybole  
1936 Gray, William, jun., Park, Maybole  
1937 Hamilton, Mrs James, Dunduff Farm,  
Dunure, Ayr  
1937 Knox, Bryce M., Smithstone House,  
Kilwinning  
1936 M'Bride, Andrew, 9 Ellis Street, Kil-  
marnock  
1936 M'Creath, William (Messrs Hutchi-  
son & M'Creath, Ltd.), Girvan  
1936 Martin, J. M., Blanehead, Maybole  
1937 Stewart, John, Artnock, Fenwick  
1936 Young, James W., West Doura Farm,  
Kilwinning  
1936 Young, William R. S., New England  
Farm, Saltcoats

### LANARK

1937 Alsop, Peter, c/o The National  
Farmers' Union Mutual Insurance  
Society, Ltd., 176 West Regent  
Street, Glasgow, C 2  
1937 Blain, William B., 28 York Street,  
Glasgow, C 2  
1936 Borland, Robert, 105 Carlisle Road,  
Airdrie  
1936 Brown, William, Cormiston Towers  
Farm, Biggar  
1936 Caldwell, Ernest T., Yorkshire Insur-  
ance Co., Ltd., 82 St Vincent Street,  
Glasgow, C 2  
1936 Carslaw, Graham Reid, Drumalbin,  
Thankerton  
1936 Clark, Miss Ena, Windlaw Farm,  
Carmunnock  
1937 Craig, Robert, Rhyber Lodge, Lanark

1936 Dunlop, Alexander, 67 Hope Street,  
Glasgow  
1937 Dykes, James, East Milton, East Kil-  
bride  
1937 Dykes, Thomas, East Milton, East  
Kilbride  
1936 Fowler, Peter, jun., Newhouse Farm,  
Quarter  
1936 Galloway, George, jun., 372 Scotland  
Street, Glasgow  
1936 Gaston, Stewart C., S.C.W.S., Ltd.,  
95 Morrison Street, Glasgow, C 5  
1936 Gibson, Thomas Bell, Miltonbank,  
Carluke  
1936 Harvey, James, Commercial Hotel,  
Airdrie  
1936 Hood, Edward MacLaren, 140 West  
George Street, Glasgow, C 2  
1937 Lochhead, Alexander W., Branch  
Manager, The Gourrock Ropework  
Co., Ltd., 160 Buchanan Street,  
Glasgow  
1937 M'Kinnon, George, 40 Aros Drive,  
Glasgow, S.W. 2  
1936 MacLaren, Donald G., Castlemains,  
Douglas  
1937 MacLiver, Duncan M., B.Sc., N.D.A.,  
34 Bellahouston Drive, Glasgow,  
S.W. 2  
1937 Melkie, Richard, Newtonhead,  
Douglas Water, Lanarkshire  
1936 Murdoch, William, 53 Waterloo Street,  
Glasgow  
1936 Murray, Robin G., Spittal, Waulk-  
mill, Biggar  
1936 Smith, Hugh, Raith, Bothwell  
1937 Stevenson, Daniel (Messrs Beatty  
Brothers, Ltd.), 46 Carlton Place,  
Glasgow  
1936 Tonnant, William, 33 Hope Street,  
Lanark  
1937 Thomson, James M., N.D.A., N.D.D.,  
c/o Mr T. M. Blackwood, Hill of  
Kilncadzow, Carluke  
1937 Warnock, John, Eastfield of Coulter,  
Biggar  
1936 White, John, F.S.I. Secretary, Nether  
Pollok, Ltd., 120 West Regent  
Street, Glasgow, C 2  
1937 Wilson, A. Victor, B.Sc., A.M.I.C.E.,  
71 Merry Street, Motherwell  
1936 Wotherspoon, Gilbert W. (Messrs  
Hugh Martin & Company), 17  
Bishop Court, Glasgow, C 3  
1936 Young, James, Farm Manager, Cobble-  
haugh, Lanark  
1937 Yull, Robert M., 12A Alston Street,  
Glassford, Lanark

**RENFREW**

- 1936 Abbott, Sydney G., M.R.C.V.S.,  
D.V.S.M., 7 Hathaway Drive, Giff-  
nock  
1936 Gilmour, Ian C., Cartsbridge, Clark-  
ston  
1936 M'Intyre, Alexander, Bow Farm,  
Greenock  
1936 M'William, Iain, 3 Corsebar Drive,  
Paisley  
1936 Pottle, Alexander, M.R.C.V.S., 26  
Love Street, Paisley

- 1936 Raeside, John, Farm Manager, Hat-  
trick Farm, Bridge of Weir  
1936 Rennie, William W., Glenview,  
Paisley  
1936 Rennie, Mrs William W., Glenview,  
Paisley  
1936 Smith, Andrew, Slates Farm, Kil-  
macolm  
1936 Stirrat, Robert, Ditch Farm, Bishop-  
ton  
1936 Wilson, Mrs William, Blackbyres  
Farm, Barrhead

**2.—PERTH DIVISION****ANGUS****(WESTERN DISTRICT)**

- 1936 Laird, Thomas Balfour, Taybank,  
Monifieth  
1936 Porter, Gordon, Turfachie, Kirrie-  
muir  
1937 Wylie, William, Longhaugh House,  
Dundee  
1936 Young, Sydney Morris, Rohais,  
Forfar

- 1937 Porter, Mrs J. F., Kinneston, Leslie  
1936 Smith, Charles Walter Martin, Priest-  
field, Ladybank  
1937 Smith, Graham MacPherson, 8 Park  
Place, Dunfermline  
1937 Smith, John M., 8 Park Place, Dun-  
fermline  
1937 Tullis, George S., Strathenry, Leslie  
1937 Wallace, William J., Kincaide, Guard-  
bridge  
1936 Williamson, John, North DumdonaId,  
Cardenden

**FIFE**

- 1937 Banks, Edward R., Pitteadie, Kirk-  
caldy  
1936 Bishop, Thomas, Gallowridge, Cul-  
ross  
1936 Cunningham, John Laurence Gil-  
christ, c/o Messrs John G. Cunning-  
ham, Ltd., Lothian Street, Burnt-  
island  
1936 Jarvis, Robert, Estate Office, Cross-  
ford, Dunfermline  
1937 Laing, Thomas, Pitlochrie, Kinglassie  
1937 Lawson, Thomas, Kirkcorthar, Mark-  
inch  
1936 M'Dougall, J. R., 36 Douglas Street,  
Kirkcaldy  
1937 M'Kenzie, Jack Harris, 279 Wellesley  
Road, Methil  
1937 Marshall, Miss Margartot Helen, of  
Baltilly, Ceres  
1936 Mitchell, Harold Paton, M.P., Tulli-  
allan Castle, Kincardine-on-Forth  
1937 Montgomery, James, North Pitkenny,  
Cardenden

**KINROSS**

- 1936 Page, Thomas, Finnerlie, Milnathort

**PERTH****(PERTH SHOW DISTRICT)**

- 1936 Aitken, Matthew, East Mill, Auchter-  
arder  
1937 Black, James, Aberdalgie Mains,  
Perth  
1936 Cox, Michael George, Methven Castle,  
Methven  
1936 Lamont, Donald R., Invervack,  
Calvine  
1936 M'Kerchar, Donald, Dupplin Estate  
Office, Perth  
1936 M'Lee, Mrs A., Blackhillock, Murthly  
1937 Mitchell, William, Easter Essendy,  
Blairgowrie  
1937 Wilson, George, Over Kinfauns,  
Perth  
1936 Wilson, John (Charles, Lawhill, Auch-  
terarder

**3.—STIRLING DIVISION****CLACKMANNAN**

- 1937 Alexander, Walter, Solsgirth, Dollar  
1937 Alexander, Mrs Walter, Solsgirth,  
Dollar  
1937 Bennett, Robert, Agricultural Engi-  
neer, Tullibody Road, Alloa  
1936 Brown, David M., Newbiggin, Cambus  
1936 Gray, Thomas M., Alloa Mills, Alloa  
1937 Harrower, Thomas, Alloa Mills, Alloa  
1936 Kerr, Miss K. M., Harviestoun, Dollar  
1936 Kerr, Mrs, Harviestoun, Dollar  
1937 M'Gee, James P., Blackfaulds, Alloa  
1936 M'Laren, Peter, Inch, Kincardine-on-  
Forth  
1937 Westwood, William J., Loanside,  
Clackmannan

**DUMBARTON**

- 1937 Allan, Andrew, J., Aitkenbar, Dum-  
barton  
1937 Allan, William Tod, Barloan, Dum-  
barton  
1936 Fyfe, Noel G., Fyfe's Poultry Farm,  
Cumbernauld  
1936 Hamilton, Alexander, High Baler-  
nock, Shandon  
1936 Johnston, James, 4 Victoria Street,  
Kilbowie, Clydebank  
1936 M'Donald, Mrs J. C., Windyridge,  
Beardsden  
1936 Paterson, David, "Morar," Milngavie

# PERTH

(STIRLING SHOW DISTRICT)

- 1937 Adam, R. M., Annet Farm, Doune
- 1937 Aitken, Robert, East Mill, Auchterarder
- 1937 Bain, William, 16 Abbey Road, Auchterarder
- 1936 Bruce, Charles W., Dunira Estate Office, Comrie
- 1937 Cameron, D. D., Severie, Doune
- 1937 Cameron, Forbes, Farm Manager, Calzie, Dunblane
- 1937 Dougall, John, Kincairney, Auchterarder
- 1937 Dougall, Mrs John, Kincairney, Auchterarder
- 1937 Duncan, John, Borland, Blackford
- 1937 Keron, Peter W., West Park, Mad-derty, Crieff
- 1936 Kilgour, Daniel, Woodlane, Blair Drummond, Stirling
- 1937 Livingstone, William Mitchell, Westerton, Doune
- 1937 M'Laren, Andrew Sharp, Fintalich, Muthill
- 1937 M'Laren, James Robert, Fintalich, Muthill
- 1936 Mactaggart, Andrew, Dunira Home Farm, Comrie
- 1937 Mickel, Robert Graham, North Bank Buildings, Crieff
- 1937 Mitchell, William, Corscaple Farm, Dunblane
- 1937 Paterson, John C., Watston, Doune
- 1937 Scougall, John, Raith, Auchterarder
- 1937 Stewart, William Black, Drumlochy, Blackford
- 1937 Walker, James, Kirkhill Auchterarder

# STIRLING

- 1937 Allan, James, Butcher, 49 Drip Road, Stirling

- 1937 Brown, Morris B., Wynchiffe, Stirling
- 1937 Buchan, John, Butcher, High Street, Falkirk
- 1936 Campbell, Alexander, Coal Merchant, Meek's Road, Falkirk
- 1937 Duff, James A., Implement Engineer, 28 Forth Street, Stirling
- 1937 Fairley, Harry, Broomage Farm, Larbert
- 1937 Gray, James, Kersie Mains Farm, Stirling
- 1937 Harley, James, Salterhill Farm, Siamannan
- 1937 Inglis, John, Rosehill, Torrance
- 1937 Kennard, Captain H. J., The Haining, Polmont
- 1937 Lennox, Captain W. M. Kincaid, Bal-lonckroch, Campsie Glen, Stirling
- 1937 Lillie, Thomas, Bluerisk, Strathblane
- 1937 Logan, John, Powis Mains, Stirling
- 1937 MacEwen, James Earl, 40 Port Street, Stirling
- 1937 M'Farlane, William, Mid Lecropt, Bridge of Allan
- 1937 M'Laren, Archibald, Larennan, Gar-gunnoch
- 1936 MacLaren, Ian, Callendar Estate Office, Falkirk
- 1937 Morton, David R (Messrs Graham & Morton, Ltd.), 12 Abercromby Place, Stirling
- 1936 Paul, Robert J. C., South Kersie, Stirling
- 1937 Russell, Archibald, Mid Bankhead, Denny
- 1937 Scott, John, Plean Mill, Plean
- 1937 Shanks, James, Gateside, Standburn, Avonbridge
- 1937 Steel, George, Ivanhoe Place, Stirling
- 1937 Steel, John, Cauldhame, Falkirk
- 1937 Stewart, Peter, Larbert Mill, Larbert
- 1937 Strang, George, jun, East Carmuir's Farm, Falkirk
- 1937 Strang, William, Randyford, Falkirk
- 1937 Taylor, Robert, Gartohyle Farm, Balfon Station

# 4.—EDINBURGH DIVISION

## MID-LOTHIAN

- 1936 Akester, William Douglas (Ransomes, Sims & Jefferies, Ltd.), 57 Lockharton Avenue, Edinburgh
- 1936 Bannatyne, Thomas, M.R.C.V.S., D.V.S.M., 9 Liberton Drive, Edinburgh 9
- 1936 Bowen, A. M., 44 Milton Road West, Edinburgh
- 1936 Cowper, Mrs Rebecca A., The Farm House, Gogar Mains, Edinburgh 12
- 1936 Fairgrieve, Alexander H., Cockholm Works, Stow
- 1936 Fairgrieve, John L., Cockholm Works, Stow
- 1936 Fairgrieve, Thomas, Cockholm Works, Stow
- 1936 Fairgrieve, Thomas D., Cockholm Works, Stow
- 1937 Galloway, R. Angus, M.C., B.Sc., Secretary, Royal Scottish Forestry Society, 3 Rutland Square, Edinburgh
- 1936 Graham, Robert (Messrs R. F. Bell & Son), 41 West Bowling Green Street, Leith
- 1937 Grant, A. W., c/o The British Oil and Coko Mills, Ltd., Seafeld Place, Leith

- 1936 Helton, Robert F., 13 Christiemiller Avenue, Edinburgh 7
- 1936 Helm, James Craig, Haltetree, Heriot
- 1937 Holman, H. H., M.R.C.V.S., Animal Diseases Research Association, Moredun Institute, Gilmerton
- 1936 Hope, James R. (Messrs J. R. & S. C. Hope), Camps Factory, Kirknewton
- 1936 Horsburgh, Peter, Broachrigg, Rosewell
- 1936 Hutchison, Andrew, 42 Morningside Park, Edinburgh 10
- 1937 Hutcheson, Arthur, The British Oil & Cake Mills, Ltd., Seafeld Place, Leith
- 1936 Laird, Patrick B., C.B., Secretary, Department of Agriculture for Scotland, York Buildings Queen Street, Edinburgh
- 1937 M'Hardy, John William, B.Sc., 53 Liberton Drive, Edinburgh 9
- 1936 Melklejohn, Alexander K. M., B.Sc., Edinburgh & East of Scotland College of Agriculture, 13 George Square, Edinburgh
- 1936 Mitchell, Robert P., Beechwood, Eakbank
- 1937 Nagel, Frank S. (Messrs P. Lawson & Son, Ltd.), 1A George IV. Bridge, Edinburgh



- 1937 Rennie, Alexander G., 108 Inverleith Row, Edinburgh  
 1936 Ross, Mrs E. S., Greenore, Eskbank  
 1937 Somerville, George, 8 Stirling Road, Edinburgh  
 1936 Steele, James Norman H., 61 Harrison Road, Edinburgh  
 1936 Steele, Mrs J. H., Polmood, Cammo Gardens, Barnton, Edinburgh  
 1937 Stewart, Andrew T., 21 Craigentinny Avenue, Edinburgh  
 1936 Strang, Alexander, 4 Duddingston Gardens, Edinburgh  
 1937 Tod, Miss Elizabeth Wallace, Royal Scottish Forestry Society, 8 Rutland Square, Edinburgh 1  
 1937 Turcan, Henry Hutchison, Murrayfield House, Edinburgh  
 1937 Wilson, A. R., 18 Comely Bank Grove, Edinburgh

## EAST LOTHIAN

- 1937 Keith, Norman William, M R C V S, "Ercildoune," Dirleton

- 1936 Kinnaid, James Clapperton, Papple, Haddington  
 1936 Logan, John, Athelstaneford Mains, Drem

## WEST LOTHIAN

- 1936 Aitken, James, Half-way House, Whitburn  
 1937 Arrol, Mrs Mary Hodgart, Netterwood, by Bathgate  
 1937 Brown, Harry Grant, Dundas Estate Office, South Queensferry  
 1936 Constable, Andrew H., East Mains Farm, Broxburn  
 1937 Cunningham, A. S., Drumcrosshall, Bathgate  
 1937 Drake, James, Middlerigg, Bathgate  
 1936 M'Gowan, James, Wheatlands Farm, Kirkliston  
 1937 Walker, George, Fairmechill, Philipstoun, Linlithgow

## 5.—ABERDEEN DIVISION

## ABERDEEN

- 1937 Barclay, James, Overhill, White Cairns, Aberdeen  
 1937 Barclay, Robert Anderson, Bracside of Rothmalse, Melkie Wartle  
 1936 Ishister, Sam, North of Scotland College of Agriculture, 41½ Union Street, Aberdeen  
 1936 Lee, Ernest B., Boodroad, Tarves  
 1936 Mackie, William C., Blacksmith, Thriepfield, Udry  
 1936 Marshall, John Douglas (Messrs Marshall & Philp), 179 Union Street, Aberdeen  
 1936 Muirhead, Kenneth E., 114 Middlefield Place, Smithfield, Aberdeen  
 1937 Robson, Robert M'K., 196 Midstocket Road, Aberdeen  
 1936 Sleigh, Charles G., St John's Wells, Fyvie

## ANGUS

## (EASTERN DISTRICT)

- 1937 Young, John, Assistant Manager, The Brechin Agricultural & Trading Co., Ltd., Park Road, Brechin

## BANFF

- 1937 Dickson, P. D., Doune Park, Banff  
 1936 Rattray, John C., Hilton Farm, Buckie  
 1936 Thomson, William Ian Macdonald, Burnside of Tynet, Clochan

## KINCARDINE

- 1937 Donald, Douglas A. II., Little Farrochie, Stonehaven

## 6.—DUMFRIES DIVISION

## DUMFRIES

- 1936 Beith, Alexander G., Hunter's Lodge, Moniaive  
 1936 Beith, Donald, Hunter's Lodge, Moniaive  
 1936 Douglas, George A., Westwater, Langholm  
 1936 Fleming, Robert Jack, Becks, Langholm  
 1937 Glendinning, Arthur, B.Sc., Gillenble, Lockerbie  
 1936 Hendrie, Gavin, Drum Farm, Thornhill  
 1936 Hendrie, William, Castlehill Farm, Durisdeer, Thornhill  
 1936 Hovle, Commander E. B., R.N. (Retd.), Bogfoot, Ewes, Langholm  
 1936 Hovle, Mrs E. B., Bogfoot, Ewes, Langholm  
 1936 Jackson, James, Highlaw, Lockerbie  
 1937 M'Call, Kenneth Murray, Caitloch, Moniaive  
 1936 Maxwell, M'Kill, Hayfield, Thornhill  
 1937 Paterson, William, Denbie Mains, Dalton, Lockerbie  
 1936 Telfer, William, Carco, Sanquhar

## KIRKCUDBRIGHT

- 1936 Biggar, James, Grange, Dalbeattie  
 1936 Biggar, Walter Andrew, Grange, Dalbeattie  
 1936 Biggar, William Sproat, Grange, Dalbeattie  
 1936 Finlay, John, Ross, Kirkcudbright  
 1937 Hunter, William, Groyknowe, Maxwelltown, Dumfries  
 1937 SINCLAIR, The Lady, Milton Park, Dalry  
 1936 Wright, W., Airleland Farm, Castle Douglas

## WIGTOWN

- 1937 Imrie, Lieut.-Colonel Hew Blair, Barbrochwood, Newton-Stewart  
 1936 M'Dowall, David William Stewart, Auchengaille, Port William  
 1936 M'Dowall, John A., jun., Old Mill, Port William  
 1936 M'Harg, Mrs Annie, Barbeth, Stran-

## 7.—INVERNESS DIVISION

### CAITHNESS

1937 Beath, James, Crown Estates Office,  
Thurso

### INVERNESS

1937 Hamilton, William, Tullochgrribban,  
Grantown-on-Spey (Inverness)  
1937 M'Erlich, Captain Roderick, Estate  
Factor, Lochmaddy, North Uist  
1936 Paterson, Mrs Elizabeth, Sorelle  
Lodge, Benbecula, South Uist  
1937 Sanderson, Mrs Margaret, Blackpark  
Poultry Farm, Muirtown, Inverness

### ORKNEY AND SHETLAND

#### ORKNEY

1936 Baillie, James, Snelsetter, Longhope,  
Orkney

### ROSS AND CROMARTY

1936 Logan, Mrs J. F., of Suddie, Mun-  
lochly

### SUTHERLAND

1936 Grant, Malcolm M., Pulroasie,  
Dornoch

## 8.—BORDER DIVISION

### BERWICK

1936 Adam, Gordon, Dykegatehead, Chirn-  
side  
1936 Allan, James, jun., Kirkhill, Earlstoun  
1936 Allen, J. S. D., Birkenside, Earlstoun  
1936 Bell, Thomas H., Hutton Mains,  
Paxton  
1936 Bennett, James L., Clackmae, Earl-  
ston  
1936 Brown, Andrew, Riggle, Oxton  
1936 Dobson, George M., Lylestane,  
Lauder  
1936 Forrest, John Dunlop, Middlefield,  
Duns  
1936 Forrest, Samuel S., Middlefield, Duns  
1936 Fullarton, James Wilson, Cockburn,  
Duns  
1936 Grievie, Simon, Rumbletonlaw, Green-  
law  
1937 Jones, S. C., Auctioneer, Duns  
1936 LAUDERDALE, The Earl of, Thirle-  
stone Castle, Lauder  
1936 MacGregor, James Wallace, Cold-  
stream Mains, Coldstream  
1936 Pate, George P., West Blacarne, Duns  
1936 Runciman, John F., Wantonwalls,  
Lauder  
1936 Sanderson, James H., Gunsgreenhill,  
Ayton  
1936 Seed, John M., Woodend, Duns  
1936 Stevenson, William, Blackburn,  
Lauder  
1936 Turnbull, Hall Allen, Stuartalaw,  
Edrom  
1936 Turnbull, Thomas W., Easter How-  
laws, Greenlaw  
1936 Walker, Miss Jessie, Carfrae Mill  
Hotel, Oxton  
1936 Walker, Miss Mary, Carfrae Mill  
Hotel, Oxton

### PEEBLES

1937 Gilroy, George K., Kingledores,  
Broughton  
1936 Richardson, Ernest, Tweedbank,  
Innerleithen  
1937 Steel, James, sen., Burnfoot, Biggar  
1936 Thorburn, Lady Isabel H., Glenor-  
miston, Innerleithen

### ROXBURGH

1936 Allen, Sydney, Longnewton, St Bos-  
wells  
1936 Anderson, Peter B., Under Chatto,  
Jedburgh  
1936 Arnott, Mrs Helen H., Haymount,  
Makerstoun, Kelso  
1936 Brown, Captain P. G., R.N. (Retd.), of  
Weena, Bonchester Bridge, Hawick  
1936 Burns, Major David, O.B.E., M.C.,  
The British Linen Bank, Newtown  
St Boswells  
1936 Daykins, Samuel B., Wester Ulston,  
Jedburgh  
1936 Dodds, Thomas Johnston, Clarlilaw,  
Melrose  
1936 Douglas, John Haig, Gatehousecote,  
Hawick  
1936 Elliot, Miss E. R., Hollybush, Gala-  
shiels  
1936 Grievie, James, Ladyrig, Kelso  
1936 Hamilton, Engineer-Commander G. J.  
R.N. (Retd.), St Kierans, Melrose  
1936 Hamilton, Mrs G. J., St Kierans,  
Melrose  
1936 Leadbetter, George G., Knowesouth,  
Jedburgh  
1936 M'Lelland, Mrs K. T., Wester House-  
byres, Melrose  
1936 Martin, C. D., Friars Hall, Melrose  
1936 Martin, Mrs Donald, Friars Hall,  
Melrose  
1936 Noble, William, Plimuir, Hawick  
1936 Oliver, James Kenneth Murray,  
Hassenden Bank, Hawick  
1936 Paterson, Henry, Kenora, Newtown  
St Boswells  
1936 Robertson, Duncan, Galalaw, Kelso  
1936 ROXBURGH, The Duke of, Floors  
Castle, Kelso  
1936 Templeton, Miss E., Sandyknowe,  
Kelso  
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Kelso  
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1936 Tudhope, Thomas, Orwell, Galashiels  
1936 Turnbull, Andrew, Maxwellheugh,  
Kelso  
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Kelso

- 1936 Turnbull, James B, Birch Grove,  
Newtown St Boswells  
1936 Waddell, John F, Middle Softlaw,  
Kelso  
1937 Wheatley, J D, Poultry Appliance  
Maker, Overhall, Hawick

## SELKIRK

- 1936 Amos, Andrew, Synton Mains, Ash-  
kirk, Selkirk

- 1936 Bell, B. J., Dunreay, Selkirk  
1936 Brunton, Robert H., Over Whitlaw,  
Selkirk  
1936 Cameron, G. J., Weatherhouse, Bow-  
hill, Selkirk  
1936 Martin, Miss S., Hutlerburn, Selkirk  
1936 Mitchell, George, Butcher, 15 West  
Port, Selkirk  
1936 Thomson, George, Ramseycleugh,  
Ettrick, Selkirk  
1936 Turnbull, George, Howford, Ettrick,  
Selkirk

## ENGLAND AND WALES

- 1937 Barnes, Joseph, Barugh Syke, Wigton,  
Cumberland  
1936 Bosworth, J C T, 91 Richmond  
Road, Lincoln  
1937 Brough, John (Messrs Johnson &  
Darlings, Ltd), 6 Parade, Berwick-  
on-Tweed  
1936 Campbell, John M'Knight, Holly-  
hurst, Darlington  
1936 Drummond, David M'Kay, Carleton  
Hill, Carlisle  
1936 Elder, George Robert, 5 Lovaine  
Terrace, Berwick-on-Tweed  
1936 Ferguson, P M (Messrs James A.  
Jobling & Co, Ltd), "Struan,"  
Oakfield Road, Gosforth-on-Tyne  
1937 Fison, J R G (National Fertilizers,  
Ltd), 10 Old Jewry, London, E C 2  
1936 Hurd, Miss Molly, Little Broughton,  
Cockermouth, Cumberland  
1936 Hobson, Alec, Secretary, National  
Pig Breeders' Association, Victoria  
House, Southampton Row, London,  
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1936 Johnston, George, East End, Norham-  
on-Tweed  
1936 M'Creath, Henry G, Cheviot House,  
Castle Terrace, Berwick-on-Tweed

- 1937 MacKay, Eric D. (Messrs Johnson &  
Darlings, Ltd), 5 Avenue, Berwick-  
on-Tweed  
1936 M Leod, John, D Sc, Ph D, Cooper  
Field Research Station, Little Gad-  
desden, Berkhamsted, Herts  
1936 Martyn, Charles H, c/o Messrs  
Blackwell & Son, Braunton, North  
Devon  
1936 Messer, Malcolm, Editor, 'The  
Farmers' Weekly,' 43-44 Shoe Lane,  
London, E C 4  
1936 Minton, Vincent Harry (Messrs Vegi-  
dine, Ltd), Welwyn Garden City,  
Herts  
1937 Murdoch, Alexander G, Cardington,  
Bedford  
1936 Pattullo, Ian H, Norsted Manor,  
Farnborough, Kent  
1936 Scott, Edward, West Foulden, Ber-  
wick-on-Tweed  
1937 Siddall, J M, F A I (Messrs Siddall  
& Corbett), Wadslcy Bridge, Shef-  
field 6  
1936 Taylor, Kenneth B, Milton Hall,  
Brampton, Cumberland  
1937 Vint, Wyndham Theodore, Solicitor,  
Commercial Bank Buildings, Brad-  
ford, York

## THE DOMINIONS AND COLONIES

- 1937 Loch, Lieut-Colonel Gordon, C I F,  
Bahraïn, Persian Gulf

- 1937 Spence, Julian Macqueen, c/o Sudan  
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Highland and Agricultural Society of Scotland

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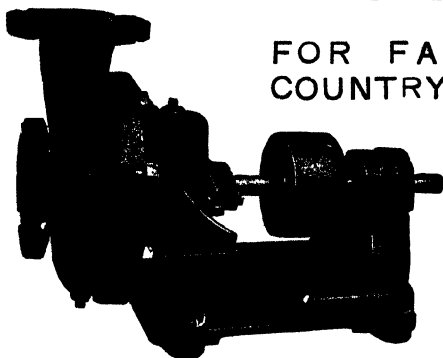
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